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# A Study of Literacy Efficacy and Student Achievement Among Beginning Middle School Teachers in an Urban Context

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**A STUDY OF LITERACY EFFICACY AND STUDENT ACHIEVEMENT AMONG  
BEGINNING MIDDLE SCHOOL TEACHERS IN AN URBAN CONTEXT**

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A Dissertation Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the  
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

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## **ABSTRACT**

### **A STUDY OF LITERACY EFFICACY AND STUDENT ACHIEVEMENT AMONG BEGINNING MIDDLE SCHOOL TEACHERS IN AN URBAN CONTEXT**

Michael J. Mustain  
Old Dominion University, 2006  
Director: Dr. Dean S. Cristol

Many U.S. school districts are addressing concerns in the areas of literacy education, teacher shortages, and overall student achievement. Teacher preparation in the area of literacy education and the ability of core subject teachers to include literacy components in their daily lessons appears vital to student achievement. Teacher shortages, particularly in high need, “hard to staff” urban schools, are a serious problem that alternative preparation programs help to address. Alternative preparation programs can provide highly qualified teachers in urban schools. The Transition to Teaching (TTT) trained teachers provided literacy education that in turn helped improve benchmark tests, end-of-year tests, cumulative scores, and standardized test scores.

The TTT Program, a joint partnership between a southeastern Virginia urban school system and a local four-year public university, provides a viable solution which addresses the need for highly qualified core teachers with literacy training in the school division. A quasi-experimental design was used to compare achievement levels of students taught by beginning core-area teachers prepared with content-specific coursework for teaching literacy skills in the TTT school-university partnership program with students taught by beginning core-area teachers who did not experience content-specific coursework for teaching literacy skills. The two groups of teachers, TTT and non-TTT, were also measured on literacy teaching efficacy based on scores from a

literacy survey instrument. Results from the study in the area of student achievement revealed that middle school students taught by the beginning TTT teachers trained with content-specific coursework in teaching literacy skills achieved better overall than those students taught by the beginning non-TTT teachers who had no specific training in teaching literacy skills. Results from the literacy survey revealed no significant differences between TTT and non-TTT teachers in overall literacy teaching efficacy and their beliefs about the importance of teaching literacy skills across the curriculum. In summary, the study showed that the experience of completing content-specific coursework in teaching literacy skills positively impacted student achievement in middle school core academic content areas.

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**ABBREVIATIONS**

AC:	Alternative Certification
AL:	Alternative Licensure
AMO:	Annual Measurable Objective
ANOVA:	Analysis of Variance
AYP:	Adequate Yearly Progress
IHE:	Institute of Higher Education
LEA:	Local Educational Agency
NCEI:	National Center for Education Information
NCES:	National Center for Education Statistics
NCLB:	No Child Left Behind
NTE:	National Teacher Examinations
ODU:	Old Dominion University
SERTE:	The National Commission and sites of Excellence in Reading Teacher Education
SOL:	Standards of Learning
SPSS:	Statistical Packages for the Social Sciences
TC:	Traditional Certification
TL:	Traditional Licensure
TFA:	Teach for America
TTT:	Transition to Teaching
USDE:	United States Department of Education
VDOE:	Virginia Department of Education

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# CHAPTER I

## INTRODUCTION

### Background of the study

In response to increased demand by parents, school boards, administrators, and legislators, public schools are experiencing tremendous pressure to be fully accredited according to state standards and be in compliance with the federal *No Child Left Behind Act of 2001 (NCLB)*. As part of both the Virginia Standards of Learning (SOL) and the NCLB accreditation process, school divisions must employ only highly qualified teachers in core-area subjects by the year 2007. There is a sense of desperation to raise test scores, and both teachers and schools feel the pressure (Jehlen, 2004). In this era of accountability, studies indicate that by teaching literacy skills on a regular basis in the content areas, teachers can raise student achievement levels during the middle years (Sousa, 2005). Lack of sufficient literacy skills for many students entering middle school automatically puts them at risk for achieving any success in academic learning (Harmon, Keehn, Kenney, & Wood, 2005). In order to meet these literacy challenges, teachers need better training in teaching literacy skills and developing good readers and writers regardless of the subject area they teach. As Massey (2004) stated, “educators must begin to bridge the gap between effective literacy instruction and high-stakes test preparation” (p.77).

Teachers trained in literacy will be better equipped to teach every student in the class. The International Reading Association in 2002 reported in a position paper that a systematic national investment was needed in teacher education to ensure that teachers

were adequately prepared to meet the literacy needs of their students from the moment they begin teaching (Fisher, Brooks, & Lewis, 2002). This study examined the level of student achievement between beginning alternatively trained core subject teachers who were trained in literacy and beginning core subject middle school teachers with no particular literacy training. The study also examined the impact teacher self-efficacy in teaching literacy had on student performance. Most teachers in traditional teacher education programs complete minimal coursework in the area of reading or adolescent literacy. The research indicates that teachers need more training in the development of instructional strategies within their core content areas to effectively teach literacy skills. Teacher training focused on a comprehensive redesign of curriculum used to prepare teachers to give reading instruction is most effective (Young, 2001). Middle school is the last chance for many students who struggle in the areas of reading and writing. Content area middle school teachers knowledgeable in research-based interventions can have a major impact on student literacy levels by offering these students the support they desperately need (Sousa, 2005).

Despite limited time and personnel, schools must take on more of the responsibility to educate the collective populace of students in an individualized manner (McCoy, 2002). Training in literacy education is vital, and teachers should be knowledgeable about language and literacy issues and be adept at relating these understandings to their daily working knowledge of individual students. Teacher education in the area of literacy needs to be more dynamic and sophisticated (Heydon, Hibberts, & Iannacci, 2005). Research suggests that appropriate professional development for teachers can produce higher reading achievement in students (Anders,

Hoffman, & Duffy, 2000). Effective teachers integrate reading and writing as often as possible because they know that each process reinforces the other and can lead to improved comprehension and retention of subject area content (Tierney & Shanahan, 1991).

Educating students is a challenge in many urban school districts due to environments outside of school that many times do not support what is taught in school. However, schools and districts are still responsible for improving achievement and test scores as well as closing any achievement gaps that may exist among racial groups or socioeconomic circumstances. Newmann (2002) maintains that teachers in effective schools have confidence in their students' potential even when the students' lives beyond school present enormous challenges to physical, social, and emotional development (Hawley & Rollie, 2002). Teachers and students working together can overcome long odds and possible failures linked to students' past school experiences, and effective teachers find a way to ensure all students achieve to their potential (Newmann, 2002).

“Having a highly qualified teacher in every classroom is a particularly acute problem in urban settings” (Bradley & Loadman, 2005, p.5). In a study based on a sample of 54 of the largest urban school districts in the United States, it was reported that more than 82 percent of these urban districts allow “noncredentialed” individuals to teach due to the difficulty in hiring and retaining highly qualified teachers (Bradley & Loadman, 2005). Research has revealed that some alternative preparation programs have been successful in recruiting and training a more diverse pool of teachers (Wilson, Floden, & Ferrini-Mundy, 2001). Cultural awareness among teachers and students is extremely important, and the task of providing teachers with alternative certification

routes that emphasize the importance of culture within the classroom is vital to the future success of a teacher working in an urban environment (Darling, 2005). Currently, there has been an increased movement towards alternative routes to teacher education. Over the past 35 years, an increased demand for teachers has diluted teacher quality, while the supply of highly qualified candidates has been undercut by greater money and prestige associated with other professions (Carter, 2000). “Due to a shortage of teachers in the United States, one that is particularly acute in poor urban areas, the overwhelming majority of states now have alternative routes to teacher preparation” (Costigan, 2005, p.28). Many school systems throughout the country employ teachers who have “switched” careers. Universities and colleges are joining with school districts and states in organizing alternative preparatory programs to put more teachers into K-12 classrooms (Holland, 2003). The *Chronicle of Higher Education* (January, 2000) reported that approximately 250 institutions of higher learning offer “alternate routes” to teaching for persons whose jobs or college degrees have been in fields other than education. Using alternative route teacher programs is one way to help close the achievement gap because they often attract more diverse and mature prospective teachers than do many university-based programs (Williams, 2003).

Alternative route teaching programs are becoming increasingly commonplace and now play a central role in the production of new teachers nationwide (Humphrey, Wechsler, Bosetti, Wayne & Adelman, 2002). Alternative teacher training programs have a higher percentage of males, minorities, and people over thirty, and these teachers are more likely to teach in urban schools (Natriello & Zumwalt, 1993). Providing high quality alternative preparation programs is a promising way to attract people into the

profession, help with teacher preparation issues, and help solve the problem of teacher shortages (Roach & Cohen, 2002). The American Association for Employment in Education (1999) reported considerable teaching vacancies in areas such as physics, mathematics, chemistry, foreign language, and special education (Giuliano, 2002). The National Center for Education Statistics (2001) reported that the number of teachers needed by the year 2011 will increase by ten percent from 1999. Two million teachers will be needed nationwide to fill vacancies created by retirement, retention, increased student enrollment, and reductions in class size (Howard, 2003). With the possibilities of teacher shortages across the nation, many schools will need not only more teachers, but highly qualified teachers. Alternative preparation is continually evolving to meet this demand by focusing on teacher development, recruitment, and retention. In July 2002, the U.S. Secretary of Education issued the *Secretary's Annual Report on Teacher Quality*, that reported little evidence that education school course work leads to improved student achievement; stating that the evidence about knowledge of pedagogy, degrees in education or amount of time spent student teaching is surrounded by a great deal of contention (Darling-Hammond & Youngs, 2002). This conclusion supports the belief that good teachers produce higher rates of student achievement, and there is no scientifically-proven relationship between the manner in which a teacher receives certification and the level of their teacher effectiveness. Alternate routes to certification demonstrate that streamlined systems can boost the quantity of teachers, although much debate exists concerning overall success of alternate route programs (Darling-Hammond & Youngs, 2002). As more pathways continue to open for those interested in becoming teachers, it

is imperative that the focus be on high standards that can support all teacher preparation programs, including alternative certification routes (Spooner, 2005).

#### Description of the TTT Program

Partnerships between universities and school divisions are a way to alleviate teacher shortages by bringing qualified teachers through a designed process into school divisions. In this federally funded study, a four-year public university and a southeastern Virginia public urban school division prepared teachers who were not trained in traditional preservice teaching programs. The partnership allowed the school division to hire teachers while the university enrolled them in a master's of science in education program with an emphasis on literacy education, and provided the prerequisite courses they must complete to obtain a Virginia teaching license. The goal of this partnership was to make sure the alternatively trained teachers coming through the Transition to Teaching program were adequately equipped to meet the needs of their students both in their core subject and in the area of literacy. The five-year grant program had a target population of recent college graduates, career switchers, substitute teachers, and paraprofessionals with prior classroom experience (NNPS TTT Program, Year 1, Report 1, July 2003). In order to enter the TTT program, applicants needed a bachelor's degree, at least five years of full-time work experience or the equivalent through a verifiable experience or academic study, and Virginia qualifying scores on Praxis I (academic skills assessment) and Praxis II (subject assessment) as prescribed by the Virginia Board of Education (Virginia Department of Education, 2003).



### Statement of the problem

Schools and school divisions need to design effective literacy programs on the basis of research involving teacher training and student learning in order to meet this demand. Training core teachers to provide direct instruction in literacy strategies as part of their everyday teaching in the content areas will improve student comprehension and learning (Santa, 2006). Core teachers who specialize in subject areas such as science, social studies, math, or English, need preparation in literacy in order to provide students with reading and writing activities on a daily basis (Strauss & Irvin, 2000). Teachers that are willing to know the learner, understand the literacy demands of content areas, match instruction to students, and create an environment that stresses literacy will be successful (Jacobs, 2003). Beginning teachers completing their first year of teaching who possessed a high sense of teacher efficacy, found greater satisfaction in teaching, had a more positive reaction to teaching, and experienced less stress (Hoy, 2000). Students of efficacious teachers often achieve at a higher level in most environments, including urban, rural and minority schools (Chambers & Hardy, 2005). Teacher efficacy must be related to literacy instruction in order to understand whether or not a teacher is confident in teaching reading and writing across the curriculum. Students will only experience success when they learn to analyze material and ask logical questions (Tovani, 2000). Standards for what the United States views as acceptable literacy levels continue to change. Carbo (2003) stated, "low reading ability has a devastating effect on our nation and on our people, especially the poor" (p. 23). Teachers should be at the forefront of this change and be willing to introduce and connect students to all forms of literacy. Literacy teaching is every teacher's job, and students need to learn reading, writing,

speaking, listening, and viewing skills during the entire school day. Teachers who purposefully implement literacy processes into their daily lessons, despite the content area in which they are teaching, will facilitate improved speaking, reading, and writing in their students (Taylor, 2004). “Educators have long acknowledged that literacy is a crucial part of the teaching of any content area” (Draper & Siebert, 2004, p.958).

Nye, Konstantopoulos, and Hedges (2004), demonstrated that teacher effects are a significant factor in achievement gains of students. The responsibility to consistently provide programs and techniques to improve student literacy levels are shared by state boards of education, school divisions, schools, and teachers. Fernandez (2001) does not blame schools and teachers, but believes schools must take action and be aware of the important role they play in teaching literacy. Fernandez states, “understanding that schools are not failing because they are accomplishing less than they historically have, but because expectations regarding literacy standards are escalating, is crucial to solving the real problems of undereducation and miseducation” (p.33). The goal of content-area teachers should be helping their students read and write in their subject field (Draper & Siebert, 2004). Teachers who believe they can improve student literacy levels across grade levels and subject areas are paramount to a student’s success.

With the expected need for large numbers of qualified teachers in urban schools, alternative preparation programs provide school systems with a viable solution in filling teacher vacancies. As Stoddart and Floden (1995) suggested, “alternative-route programs give school districts a choice between hiring teachers with different types of certification. Such provisions have been widely used to deal with teacher shortages” (Zeichner, Melnick, & Gomez, 1996, p.80). Developing a teacher’s efficacy level in his/her ability

to teach literacy skills in core subject area classes starts with the teacher realizing that the quality of teacher training and classroom instruction provided to students are two major factors in preventing reading difficulties in our children (Young, 2001). Teachers should understand that they share the responsibility for literacy development across the curriculum, and incorporate literacy concepts into their teaching through different instructional strategies (Vacca, 2002).

Alternatively trained teachers possess some different but important qualities as opposed to traditionally trained teachers. Many alternatively trained teachers are more likely to prefer teaching in lower income, urban schools; have experienced their own urban education during their schooling at twice the rate of traditionally prepared teachers, and often times are more responsive to the needs of the urban student (Natriello & Zumwalt, 1993). The students they teach will have differing learning abilities and styles, and possess varying reading and writing skills, and face unpredictable circumstances mirroring the communities they serve and the society in which they live (Goodlad, 2004). The level of success achieved by a teacher may depend on his or her ability to understand each student and differentiate instruction to ensure students' needs are being met. According to Nordlund (2003), teachers are continually challenged by the task of differentiating instruction so that every child can reach his/her potential. Having the ability to relate to students regardless of the setting will increase the teachers' chances of having students reach their potential.

There is much debate as to whether or not teachers who enter the field of education through alternative programs are as well-trained and effective when compared to teachers who complete their training through traditional university-based education

programs. According to Wilson and Floden (2003), there is a minimal amount of research that truly measures the difference in effectiveness between alternatively licensed teachers and teachers who completed a more traditional university education program. Many teachers coming from university teacher preparation programs struggle in teaching reading effectively to their students. Alternative teacher preparation programs, such as the Houston Independent School District Alternative Certification program, produce much more competent and effective teachers (Carter, 2000). The current research is contradictory and inconclusive, with some research suggesting that secondary teachers who have gone through traditional teacher education programs are better prepared in the areas of content knowledge and pedagogy. Furthermore, other research indicates that alternative teacher preparation programs may negatively impact student achievement (Laczko-Kerr & Berliner, 2003). "There is a lot of research on teacher education", according to Marilyn Cochran-Smith (2005), but not much research that truly measures the impact that alternative certification has on student achievement (Viadero, 2005). Conversely, Goldhaber and Brewer (2000) reported that there are strong influences of teacher preparation on student achievement. They found that the type of certification a teacher possesses is an important determinant of student outcomes. Whichever pathway is taken, be it traditional or alternative, knowledge acquired by the teacher through his or her educational training program is strongly correlated with teacher performance, and teacher effectiveness may be the most important factor in the overall academic growth of students (Sanders, 1998).

Another study conducted through the Teach For America (TFA) organization revealed that the TFA teachers were about as effective as other inexperienced teachers.

This was determined after controlling for teacher experience and classroom demographics (Raymond, Fletcher, & Luque, 2001). Teach for America candidates are recruits from selective universities who receive a few weeks of training before they begin teaching. The TFA program seeks to attract academically able recent college graduates into two-year teaching commitments in hard-to-staff districts. After the aforementioned summer training, the recruits are placed in poor urban and rural schools on emergency teaching permits (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005).

Despite the high demand for more teachers, schools must continue to ensure that alternative trained teachers meet the standards of the individual state. In Virginia, alternative licensure programs require a four-year degree from an accredited institution, at least five years of work experience, the completion of teaching area requirements for an endorsement in a content area or the equivalent through verifiable experience or academic study, and state qualifying scores on the Praxis I and II or professional teacher's assessment (Virginia Department of Education, 2003). This aligns with the belief that a teacher's verbal ability is directly correlated to student success in the classroom, and those seeking alternative certification should pass tests that demonstrate competence in the spoken and written forms of the English language (Darling-Hammond, 2000; Stronge, 2002; Freytag, 2002).

### Purpose and Rationale

In education, one of the major determinants for school success is performing well on standardized accountability tests, such as the Virginia Standards of Learning. With the passage of the *NCLB Act of 2001*, school systems are now judged not only by state

accountability scores, but also by whether or not they meet adequate yearly progress (AYP) within the federal guidelines. Ardovino, Hollingsworth, and Ybarra (2000) suggest that the word “accountability” resonates across the nation and lands at the front door of every school. Schools must prove their students are achieving at a state determined level. Districts, schools, and teachers are judged on test scores of their students, and must disaggregate data and formulate strategies to continually improve this area. The focus of education is now undoubtedly on literacy and student outcomes, and students must continue to improve literacy skills in order for schools to make acceptable progress (Lee & Wong, 2004).

According to Friedland and Truscott (2005), “research reveals that students in upper elementary and middle school generally have a negative attitude toward reading and positive attitudes towards reading significantly decline by sixth grade regardless of reading ability” (p.550). If a student cannot read by the eighth grade, not graduating becomes a distinct possibility. Without a high school diploma in today’s society, a person cannot enter military service or gain employment in many service-oriented jobs (Papalewis, 2004). Reading development depends mainly upon interactions that the student brings to the skill of reading and the environment in which this development occurs (McBride-Change, 2004). Teachers should focus on developing student literacy levels along with teaching a subject’s content, thus providing rich, high quality literacy instruction on a daily basis. Teachers frequently recognize their students literacy skills are underdeveloped, but are unsure of how to blend effective literacy practices into their content instruction (Sturtevant & Linek, 2003). According to Vacca (1998), many teachers who understand that underdeveloped literacy skills will impoverish their

students both academically and economically, struggle to involve frustrated, alienated, or passive learners. The Nation's Report Card (2005), a report presenting national results of the National Assessment of Educational Progress (NAEP) assessment in reading found that no state had a higher average score in reading in 2005 than it had in 2003. Seven states had lower scores in 2005 when compared to 2003 scores (Perie, Grigg, & Donahue, 2005). More than two-thirds of U.S. students struggle to read at a proficient level (National Center for Education Statistics, 2003), and the U.S. Department of Education is calling for more research and study into programs designed to improve adolescent literacy (Biancarosa, 2005).

Content area teachers are accountable for student test scores and achievement, but have very little training in the teaching of reading and writing, and are often times confused about when and what literacy strategies to implement (Combs, 2004). Secondary teachers express concern regarding the reading and writing problems of struggling students. However, with the exception of English and language arts, most content area teachers do not view themselves as reading teachers, and they often express doubts about their ability to provide effective literacy instruction (Sousa, 2005). Content area teachers are in a strategic position to influence adolescents' uses of literacy for academic learning (O'Brien & Stewart, 1990; Vacca & Vacca, 1996). However, despite their influence, content area teachers often resist literacy practices, even though they may have taken a preservice or inservice literacy course as required for teacher licensure. "To literacy educators, it appears that content-area teachers seldom explicitly address literacy in their classes" (Draper & Siebert, 2004, p.927). Without a middle or high school's long-term commitment to professional development and organizational change, it will

continue to be difficult for teachers to sustain the use of content area literacy practices in their instructional plans. Whether the problem stems from content-area teachers' lack of ability to teach literacy or lack of instructional time to teach literacy, teachers seldom seem to address literacy in their classes (Draper & Siebert, 2004).

The purpose of this research was to examine the effects of a literacy centered teacher education program on middle school student achievement and how the program affected the teachers' ability to teach literacy in the four content areas: English, math, social studies, and science. The purpose of the study was intended to answer two research questions: (1) Did middle school students taught by beginning teachers prepared with content-specific coursework for teaching literacy skills in the Transition to Teaching (TTT) school-university partnership achieve as well as the middle school students who were taught by non-TTT teachers who did not experience content-specific coursework for teaching literacy skills?; (2) Did beginning teachers who experienced content-specific coursework for teaching literacy skills through a non-traditional teacher preparation program have higher levels of literacy teacher efficacy than beginning teachers who did not experience content-specific coursework for teaching literacy skills?

### Significance of the study

Data collected during this study will aide school systems as well as colleges and universities in examining the importance of literacy training and teacher efficacy for content-area teachers. Measures of student achievement on quarterly tests and SOL tests as well as teacher surveys dealing with efficacy in teaching literacy were used as indicators. Partnerships such as the TTT program between are both helpful and needed



given the problems public schools face with literacy learning and teacher shortages and effectiveness. Research and evaluation of teachers participating in such programs is vital in determining the cost and time effectiveness for both the school system and university.

#### Relationship to urban services and urban education

This particular study took place in an urban school district. The teachers in the master of literacy program were employed by a Southeastern Virginia Public school division and taught in urban middle schools. They faced the challenge of developing classroom strategies that included intervention and remediation components that addressed low literacy levels. The students in urban schools need and deserve a right to well-prepared teachers, reading assessment that identifies strengths and weaknesses, and reading and writing instruction that builds both skill and the desire to read and write (Mason & Schumm, 2003). According to Cooter (2003), urban schools struggle due to huge teacher shortages, teachers working under emergency certification, and reading difficulties affecting a high percentage of students.

Urban schools offer significant challenges to teachers that many are not trained to address. In recognizing the diverse backgrounds of their students, urban schools need to hire teachers who realize that all students can learn regardless of race or socioeconomic status. “The first element common to effective teachers in urban schools is their belief that all students can be successful learners and their communication of this belief to students” (Williams, 2003, p.99). Furthermore, as Corbett, Wilson, and Williams (2002) state, “teachers must also believe that it is their responsibility to motivate all students and refuse to allow home situations or negative outside influences to serve as reasons why

students do not achieve up to their capabilities”(p.2). According to Mildred Hudson, CEO of Recruiting New Teachers Inc., recruiting and hiring more minority teachers could be helpful in lowering the achievement gap because research indicates teachers of color are less likely to place minority students in lower academic tracks, overall have higher minority student expectations, and can serve as role models for academic success. Teachers who are not of color may experience more difficulty in motivating, engaging and connecting with minority students to increase academic success (Darling, 2005). Teachers who understand the cultures and learning styles of their students are more effective educators (Thernstrom & Thernstrom, 2003).

Sachs (2004) reported that there are significant differences between teachers and students regarding race, socioeconomic status, and native language. The majority of kindergarten through grade twelve teachers are white, middle-class females from rural or suburban areas, while approximately thirty-seven percent of their students are children of color from high poverty urban areas (Feistritzer, 1998). Many of our schools’ teachers are still being prepared to teach in idealized schools that serve white, monolingual, middle class children from homes with two parents (Ladson-Billings, 1994). In order to be an effective teacher in an urban environment, teachers need both skills in reading instruction and knowledge of their students’ cultural experiences (Williams, 2003).

Urban school districts will continue to diversify and their populations will rely heavily on programs that provide ongoing literacy training from highly skilled professional teachers. Teachers who work in urban schools must recognize that many of their students have low self-esteem, poor academic skills, and in general do not like their school or their instructors. Understanding these characteristics is necessary in order to

work with urban populations (Matus, 2001). Many urban school districts have problems attracting highly qualified teachers and some urban schools, specifically in lower income areas, experience large-scale teacher shortages and high levels of teacher attrition (Darling-Hammond, 2000). Shen (1997) stated that alternative preparation programs are more likely to produce teachers willing to work in urban schools due to life and background experiences. Natriello and Zumwalt (1993) found “teachers in alternative programs are more likely to prefer to teach and continue teaching in urban areas” (Humphrey, Weschsler, Bosetti, Wayne & Adelman, 2002, p.5). According to Stoddart (1993) many alternative certification teachers are less likely to see inner-city and urban students as culturally and educationally deficient (Humphrey, et. al, 2002). Urban schools experiencing teacher shortages, particularly in the subject areas of math, science, and special education, will continue to rely on alternative certification programs to help alleviate this problem.

#### Context of the TTT program

The TTT program was designed to allow the school division to employ teachers who are receiving literacy training within a masters program in education. The main goals of the grant were: (1) attract highly qualified people into the teaching profession; (2) help these prospective teachers by providing an alternative pathway into the profession; and (3) train these prospective teachers in the area of literacy education. Populations targeted by the grant are career switchers with undergraduate degrees, substitute teachers, recent college graduates, and paraprofessional with prior classroom experience.

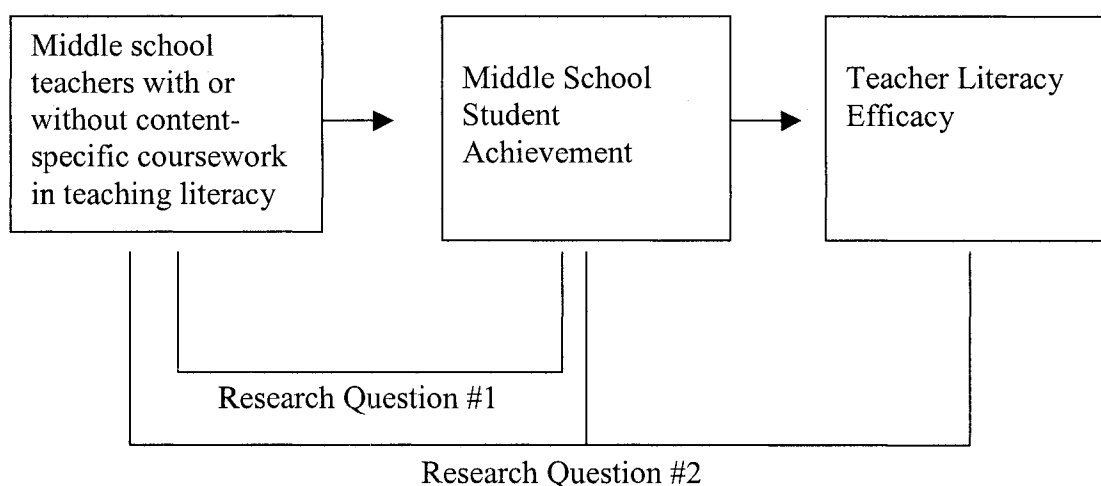
Before entering the classroom, the TTT participants undergo an intensive induction into curriculum and instruction methods, course content related to the Virginia Standards of Learning, differentiation of instruction, classroom behavior management, and human growth and development. Upon completion of the Level I work, the school division employed these teachers on the basis of obtaining their eligibility license. Level II training continued during the first year of teaching and included a minimum of 20 instructional clock hours. Each beginning teacher was assigned a mentor to help with their transition into the profession as well as providing follow-up support during their first three years in the profession. Upon completion of both the Level I and Level II training, the candidate in the alternative preparation program continued working towards their masters of science in education with an emphasis on literacy and will also be eligible to apply for a Virginia professional teaching license.

### Research questions

Teacher efficacy surveys regarding the teaching of literacy skills were given to core teachers (TTT) in the master in science literacy program and to middle school core teachers who have less than three years teaching experience. Data sets from core area standardized test scores on the Virginia Standards of Learning tests, a final quarterly benchmark test score, and student course grades were used to determine whether student achievement was higher in classrooms taught by traditionally trained teachers or those taught by alternatively trained teachers.

The following specific questions will be addressed:

- 1) Did middle school students taught by beginning teachers prepared with content-specific coursework for teaching literacy skills in the Transition to Teaching (TTT) school-university partnership achieve as well as the middle school students who were taught by the non-TTT teachers who did not experience content-specific coursework for teaching literacy skills?
- 2) Did beginning teachers who experienced content-specific coursework for teaching literacy skills through a non-traditional teacher preparation program have higher levels of literacy teacher efficacy than beginning teachers who did not experience content-specific coursework for teaching literacy skills?



### Assumptions

The following assumptions were made for the purpose of this study:

1. Subjects responded honestly to the questions on the teacher efficacy questionnaire.
2. The construct of the study did not have a reactive effect (i.e., cause the subjects to respond in a particular way) on the subjects' measured efficacy levels.
3. Study results can be generalized to accessible population (the number of teachers in the current beginning master in science program in literacy) and to the target population (the total group of subjects to whom the findings will be applied) (Ary, Jacobs, & Razavieh, 1996).

### Delimitations and limitations

The following boundaries apply to this study:

1. The subject pool consisted of masters program literacy students enrolled at a large urban university who are employed by a large, urban school district; and beginning teachers in the same core areas employed by the same school district. Therefore, no random selection took place and random assignment was not utilized.
2. The study confined itself to an examination of teacher efficacy levels and student test scores at middle schools in an urban school district. Application based on results is limited to teachers with literacy training who are alternatively certified and working in an urban school district with similar demographics.

3. This was a quasi-experimental study. True experimental design utilizing random assignment was not used; therefore causality cannot be inferred from study results.
4. The only measure of overall teacher efficacy in literacy instruction was responses to an efficacy scale. There was no measure of treatment effects across multiple domains.
5. The three measures of student achievement were the Spring 2005 Virginia SOL test scores (if taken), the school division quarterly assessment tests in the four core subjects, and the final course grades of students in content area classes.
6. Course content and instructor were the same for those teachers in the master of education program with an emphasis on literacy. The main difference among the teachers in the masters program was the core area they teach (math, English, science, social studies). Generalizability of the study is limited to the students taught by the teachers who are or are not in the TTT program and are employed by the same urban school district.
7. The research was limited in access to the experimentally accessible population of only those teachers in the TTT program as well as the other teachers participating in the study who are employed with the same school division.

### Definition of terms

The following definitions are used for the purpose of this study:

- *Adequate Yearly Progress (AYP)*: accountability component of the *No Child Left Behind Act of 2001*. NCLB requires each state to define AYP based on

expectations for growth in student achievement for different subgroups. These subgroups include major ethnic/limited English proficiency students, and students with disabilities. All students in every state for each subgroup must reach 100 percent efficiency in the areas of reading/language arts and math by 2013-2014.

- *Alternative licensure*: programs designed to provide a pathway to teaching for individuals who have not completed a teacher preparation curriculum but have had life experiences, career achievements, and academic backgrounds that are relevant for teaching in pre-K through grade 12 (Virginia Department of Education, 2003).
- *Beginning teacher*: a middle school (6-8) teacher employed by the participating southeastern Virginia public school division who has less than three years teaching experience.
- *Bloom's Taxonomy*: thinking taxonomy developed in 1956 by Benjamin Bloom. The levels of taxonomy included: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation (Gregory & Chapman, 2002).
- *Content-area literacy*: the level of reading and writing necessary to read and comprehend specific instructional materials in a content area (Readance, Bean, & Baldwin, 2000).
- *Content-area teacher*: a teacher that teaches in a subject area such as English, math, social studies, or science.
- *Criterion-Referenced Test*: generally used to determine how well students are learning relative to a pre-determined performance level on a specified set of



outcomes. The Virginia Standards of Learning tests are an example of a criterion-referenced test (Anastasi, 1996).

- *Differentiated instruction*: a philosophy that enables teachers to plan strategically in order to reach the needs of diverse learners in classrooms today to achieve targeted standards (Gregory & Chapman, 2002).
- *Highly qualified teacher*: based on NCLB legislation and the latest information concerning flexibility for states in the area of highly qualified teachers, the following definition will be used for this study: Any public elementary or secondary school teacher must have a bachelor's degree, full state certification or licensure, and proof that they know each subject they teach. Teachers must prove they know the subject they teach with:
  - a) a major in the subject they teach;
  - b) credits equivalent to a major in the subject;
  - c) passage of a state-developed test;
  - d) HOUSSE (high, objective, uniform states standard of evaluation).  
States are allowed some flexibility in developing an additional way for current teachers to demonstrate subject-matter competency;
  - e) an advanced certification from the state; and
  - f) a graduate degree.
- *Literacy*: a person's ability to use printed information to function in society, achieve goals, develop knowledge, and reach potential (Hock & Deshler, 2003).
- *No Child Left Behind Act of 2001 (NCLB)*: the purpose of this federal act was to close the achievement gap with accountability, flexibility and choice, so that no

child is left behind. NCLB law requires a single statewide accountability system that will be effective in ensuring that all public schools and school divisions make adequate yearly progress (AYP).

- *Norm-Referenced Test*: generally used to classify students. These tests are given to establish achievement differences between and among students. This allows for a dependable rank order of students across a continuum of achievement from high achievers to low achievers (Stiggins, 1994).
- *Pedagogy*: the practice of teaching
- *Praxis I & II*: the professional teacher's assessment. School systems have a qualifying score prescribed by the State Board of Education that prospective teachers must attain (Virginia Department of Education, 2003).
- *Standardized testing*: a criterion-referenced test that uses uniform procedures for administration and scoring in order to assure that the results from different people are comparable (Ardovino, Hollingsworth, & Yberra, 2000).
- *Teacher efficacy*: a teacher's confidence in his or her ability to promote students' learning (Hoy, 2000).
- *Traditional licensure*: college and university credentialing programs that certify to state agencies that candidates have successfully completed an approved program of teacher education and met state licensing requirements (Stoddart & Floden, 1995).
- *Transition to Teaching Program (TTT)*: grant partnership between a southeastern Virginia public university and a southeastern Virginia urban public school division designed to study alternative paths to teacher preparation in Virginia.

The grant was awarded based on the school division serving a large number of economically disadvantaged students as well as employing an above average percentage of teachers who are not “highly qualified” based on federal standards.

- *Urban schools*: enrolled 14 percent of all k-12 public school children in 2000. 61 percent of these students were eligible to receive free and reduced lunch, compared to 38 percent nationally. 22 percent were English language learners compared to 8 percent nationally, and 70 percent were African American compared to 32 percent nationally (Giuliano, 2002).
- *Virginia Standards of Learning Assessments*: standardized testing launched in Virginia in 1998 that requires schools to have a 70 percent pass rate in grades three, five, eight, and eleven on tests in English, math, science, and history.

#### Direction of the study

This chapter provides an introduction to the study. Chapter II will focus on the related literature concerning ideas and methodologies utilized in this study. Included are reviews of literature related to middle school literacy, teacher efficacy in literacy education, and alternative routes to teacher preparation. Chapter III details the context of the study, the research design, the identification of data sources, measures, the data collection procedures, and the data analysis strategies. Chapter IV explains results of the study, and Chapter V focuses on recommendations and implications for future studies based on the findings in this study.

## **CHAPTER II**

### **BACKGROUND OF THE STUDY**

This study involved alternatively trained middle school core-subject area teachers in an urban school district who are currently enrolled in a master's of science in education program with an emphasis in literacy. The research investigated: (1) Whether middle school students taught by beginning teachers prepared with content-specific coursework for teaching literacy skills in the Transition to Teaching (TTT) school-university partnership achieved as well as the middle school students who were taught by the non-TTT teachers who did not experience content-specific coursework for teaching literacy skills, and (2) whether beginning teachers who experienced content-specific coursework for teaching literacy skills through a non-traditional teacher preparation program had higher levels of literacy teacher efficacy than beginning teachers who did not experience content-specific coursework for teaching literacy skills.

To help frame this study, relevant literature has been reviewed in the following areas: a) middle school literacy, in regard to teacher preparation and student achievement, b) teacher efficacy in teaching literacy, and c) routes to teacher preparation.

#### Middle school literacy

Literacy is the foundation for academic success for every student in every school. Jacobs (2003) stated,

“Literacy remains at the top of each school and school system’s yearly professional development lists. Although middle school preservice teachers take a number of reading and literacy-related classes, they

continue to indicate that they feel inadequately prepared to meet the literacy needs of their students during their first year of teaching” (p.57).

If students are to learn, content area teachers should focus on developing students’ ability to read textbooks and additional materials effectively in order to learn and understand the content efficiently (Readance, Bean, & Baldwin, 2000). In essence, ensuring that there is a responsive, highly-qualified teacher of reading and writing in every classroom is the only way to achieve consistency in the area of literacy (Cooter, R., Mathews, Thompson & Cooter, K., 2004).

National reading results show that eighth grade students in middle school have increased reading levels over the last ten years by three percentage points on a scale of 0-500. The percentage of eighth grade students performing at or above the proficient level has shown only a minimal increase during that time period as well (National Center for Educational Statistics, 2003). Writing achievement among middle school students is also of significant concern. The National Assessment of Educational Progress reported in 2000 that writing achievement among middle school students has not changed much over the last 15 years. This lack of progress was discovered despite the fact that teachers have increased the amount of time students spend writing. In short, students are writing more but not writing better in school (Fisher, Frey, Fearn, Farnan, & Petersen; 2004). In order to facilitate an increase in reading and writing scores, teachers have to employ more literacy learning activities during content-area courses. Teachers need to help students process text and other media by modeling this behavior in content-area classes which in turn allow students to make cognitive connections when reading or accessing other literary materials (Tovani, 2000).

Cambourne (2000) defined seven environmental conditions that must exist for literacy learning to occur during early childhood through adolescence: 1) immersion, an interdisciplinary melding of reading concepts on a continuous basis; 2) demonstration, a modeling practice by teachers that includes peer demonstration; 3) expectation, providing directions and goals for the learner; 4) responsibility, requiring students to take ownership of goals so that it's meaningful on a personal level; 5) use, providing students with lessons that show the relevance literacy plays in their lives; 6) approximation, relating concepts with other learning experiences; and 7) response, appropriate positive feedback and response from the teacher (Clayton-Jacobs, 2003). Teachers should provide a learning environment that helps develop strong literacy and communication skills. Training teachers to help their students become strategic readers and writers is undoubtedly one of the greatest challenges facing education today (Strickland, 2000). Teaching literacy is about developing each student's potential as a reader and writer. Students engage in intensive and extensive literacy activities to help expand their ability to use language efficiently and effectively, and to increase their skill in using oral and written communication (Booth, 2001). Content-area teachers with the proper literacy training are able to deliver literacy instruction that emphasizes high quality reading and writing instruction.

High level literacy instruction children receive in school exerts a powerful influence on their ability to read and write (Fountas & Pinnell, 1996). Henk, Marinak, Moore, and Mallette (2003) state, "with the advent of the NCLB Act of 2001, society now demands assurances that schools will adequately prepare all children to be successful readers and writers; thus public accountability for effective literacy instruction is at an

all-time high” (p.322). Teacher development should include training in teaching literacy skills and developing good readers and writers regardless of the subject area they teach.

The federal government and Virginia created requirements that support a movement towards rigorous standards, as evidenced by *No Child Left Behind* (NCLB) and the *Virginia Standards of Learning Assessments* (SOL). The standards movement details specific requirements and assists improvement by detailing exactly what must be taught and learned (Kohn, 1999). The question is, what do states consider viable achievement and how is it measured? Is it measured by grades, standardized test scores, improvement from one time period to the next, or possibly a little of each? The answer is found in both process and product while measuring student achievement both individually and collectively by school and district (Kist, 2003).

The pressure on teachers to demonstrate that their students are achieving at an acceptable rate is evidenced by the amount of resources school systems invest on staff development and data analysis activities. Teacher accountability in regards to student achievement is difficult to measure, but achievement is most likely to improve in a healthy, predictable classroom, guided by a knowledgeable and enthusiastic teacher who connects with students and encourages them to be creative through risk-taking and sharing of ideas (Mendler, 2002).

Training for content teachers in the area of literacy strategies and techniques can also be linked to student achievement. To be successful in teaching literacy to all students, teachers need to become knowledgeable about effective strategies as well as diagnostic in their approach to reading instruction (Sousa, 2005). Tovani (2000) defines a strategy as an instructional plan that readers can use to help themselves make sense of

their reading. Students need to learn comprehension strategies that can be used to construct meaning from what they read. Teachers are offered two suggestions by Tovani (2000) in regard to the implementation of reading strategies. First, become a passionate reader of what you teach and find interesting material in that subject area that will both challenge and interest the students. Second, teachers should model good reading behavior. Teachers should show students how to construct meaning by sharing strategies on how to accomplish this. Schools must implement plans grounded in research in order to assist teachers in helping students achieve (Wiggins & McTighe, 1998). For example, Clark Middle School in California involved its own teachers in trying to explain poor writing test scores from 2001. Using survey results and classroom observations, the following five changes were implemented yielding a significant increase in writing scores: a school-wide focus on writing, professional development for teachers in writing instruction, specific writing curriculum in English classes, consensus scoring, and administrative accountability for writing instruction. Furthermore, every teacher interviewed believed that having writing as a school-wide focus in all classes was a major key for the increase in student writing achievement (Fisher, Frey, Fearn, Farnan, & Petersen, 2004). Bell (2004) emphasized a vocabulary approach he terms “12 powerful words (trace, analyze, infer, evaluate, formulate, describe, support, explain, summarize, compare, contrast, and predict).” Bell suggest teachers improve student literacy by using these twelve words in daily activities such as word of the day, creating songs and raps, powerpoint presentations, poetry and story writing, and including the words on tests and quizzes. The meeting of different disciplines and text throughout a day in middle school



requires sophisticated uses of literacy by teachers and students as they explore upper level content concepts found in history, science, literature, and math (Moje, et. al, 2004).

Significant research in literacy has been a reaction to the question of how best to prepare students for the higher than ever literacy demands of the technological society in which we live (Ganske, Monroe, & Strickland, 2003). The same question would apply in the preparation of teachers. Because teachers are responsible for student achievement and held accountable for student success on standardized tests, they must be aware of their own practical knowledge– the conceptions, beliefs, and personal theories embedded in their everyday teaching – and how to develop both a feeling of responsibility for the goals and effects of their teaching and the skills required to work towards those goals (Korthagen & Russell, 1995). Despite pressure from policy makers' responses to low student test scores and school accreditation, teachers should focus on the importance of teaching critical literacy skills in their classes on a daily basis (Gibbon, 2003).

The importance a teacher places on literacy in their content area and the ability to teach meaningful literacy concepts is central to improving student achievement. Lesley (2005) elaborates by stating that certification-seeking preservice teachers required to enroll in content area literacy classes often question the usefulness of such courses. Resistance toward literacy pedagogy is common of preservice teachers' attitudes in content area literacy courses at the beginning of the semester and often continues through completion of the class and into the students' teaching career (O'Brien & Stewart, 1990). There is still much resistance from new teachers toward implementing content-area literacy in middle school classrooms (Lesley, 2005). This resistance perpetuates generations of teachers who have no practical experiences with content area literacy

methods and thus see little use for such methods in their future instruction (Bean, 2004; Draper, 2002).

Teachers should emphasize reading and writing in their classrooms by being passionately supportive of the school's literacy program and allowing for time devoted to reading and writing in each class on a daily basis (Bell, 2004). "The integration of reading and writing across content areas helps students discover their areas of strength, and those strengths are used as a foundation for success" (Allen & Gonzalez, 1998, p.10). Teachers must also be sensitive to the fact that many of their struggling, resistant, or disadvantaged students come to them "educationally deprived" because many are from low socioeconomic backgrounds and minority backgrounds where many students are below-average readers (Rose, 1989). The majority of students who read below grade level have experienced very little success in literacy activities, and have limited positive experiences in their educational background (Smith & Wilhem, 2002). Also, while many educators would agree that reading and writing are mutually supportive, some consider that for at-risk students writing can be a more difficult venture than reading. Students with negative writing experiences in school refuse to leave behind any traces of incompetence in their personal writing (Allen & Gonzalez, 1998). Preparing teachers to become effective classroom literacy instructors requires an emphasis on training that integrates both reading and writing (Lewin, 2003). With the passage of NCLB legislation, Valencia and Buly (2004) maintain that "in the current environment of high-stakes testing and accountability, it has become more of a challenge to keep an eye on individual children, and more difficult to stay focused on the complex nature of reading performance and reading instruction" (p.530).

Darling-Hammond (2000) discovered that though not always specific to reading, teacher education programs and curriculums provide a catalyst for considering the importance of various programs in relation to teaching reading. It was difficult to find commonality associated with exemplary middle school reading teacher preparation programs. The National Commission and Sites of Excellence in Reading Teacher Education (SERTE) explored the issue of preparing reading teachers by analyzing the features of excellent teacher education programs across the country. Eight reading teacher preparation programs were deemed “excellent” by a team of reading experts. These programs included a diverse group of four-year teacher preparation programs, including a small, private, faith-based college, a large research institution, and a historically black college.

The sites chosen for the study included in their curriculum a strong emphasis on reading instruction and in-depth field experiences. The programs had a minimum of six credits of coursework focused on reading and language arts, and many of the programs had more than 15 credit hours of related coursework. Preservice teachers in these eight institutions were involved in over 150 hours of field experiences prior to student teaching. Although the eight teacher preparation programs differed somewhat in their organizational structure, the following features were common to each program: (a) a clearly defined institution mission that established goals for the teacher education programs, (b) faculty members were committed to preparing effective reading teachers, (c) commitment to producing capable teachers and increasing the number of minority teachers, therefore, high admissions standards are set that employ multiple measures for selection, monitoring, and support of candidates, (d) emphasis on developing a congruent

set of principles and practices for effective teaching using current literacy theories and best practices, (e) faculty that used personalized teaching to support student learning of content, as well as modeled critical teaching elements that they want preservice teachers to use with their students, (f) each program featured apprenticeship opportunities with highly-supervised field experiences that are closely integrated with course content, (g) each program fostered the professional identity of preservice teachers within a variety of communities, such as preservice and inservice teachers, and (h) faculty use of autonomy in their commitment to meet their students' needs and demonstrate creative approaches to teacher preparation. These features are important for any teacher training program, and should be present in the form of literacy training for preservice secondary school core teachers who are responsible for incorporating literacy components into subject curriculum.

The commission followed seventy-three beginning elementary reading teachers who graduated from the eight participating colleges and universities to examine the influence of the teacher preparation programs. Five common themes were found during the interview process: responsiveness in instructional decision-making, negotiating mandated programs to best meet the needs of their students, a sense of self-efficacy in their teaching of reading, consistent engagement in reflection when considering ways to improve instruction to meet student needs, and the ability to become part of an existing learning community at their schools. The teachers in this study felt they were making a difference in the literacy lives of their students. Quality teacher education and preparation does matter, and the knowledge gained in quality teacher preparation programs carries over to the first year of teaching (Maloch, Fine, & Flint, 2003).

Teachers seem to understand the importance of both motivating students to read and providing a learning environment that promotes engaged reading (Applegate & Applegate, 2004). Parents and educators agree that as students complete middle school, they should be able to read and write effectively and fluently at grade level (Burkhardt, 2003). Many teaching strategies designed to improve middle school student literacy development often go unused in content area classrooms (O'Brien, Stewart, and Moje, 1995). Content area teachers should be catalysts for learning by assisting students in their efforts to read and learn from texts (Zipperer, Worley, Sisson, Said; 2002). Effective teachers find ways to incorporate reading and writing as much as possible because they understand that each process reinforces the other and can lead to improved comprehension and retention of the core area content (Tierney & Shanahan, 1991). Teacher preparation programs should include increased attention to literacy instruction, including ways to deal with the literacy problems in adolescents (Hock & Deshler, 2003). With more attention paid to literacy instruction, more content-area teachers will be trained to recognize their responsibility in incorporating content literacy through various instructional strategies (Vacca, 2002).

According to Farstrup and Roller (2003), teachers who are trained in high quality reading preparation programs are better equipped in making the transition into the teaching profession. In a three-year study entitled, *Prepared to Make a Difference: Research Evidence on How Some of America's Best College Programs Prepare Teachers of Reading*, the National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction, the authors found that the teachers trained in literacy practice had a positive effect on student achievement. Results from the study demonstrated that

“student achievement in reading is higher for students who are engaged in the kinds of literacy activities that teachers from high quality reading teacher preparation programs provide” (Farstrup & Roller, 2003, p.2). If this type of comprehensive, longitudinal research indicates the importance of having high quality literacy content in teacher preparation programs, the issue should be addressed in order to translate literacy skills into core area classrooms.

#### Teacher efficacy in teaching literacy

Self-efficacy, according to Bandura (1986), incorporates a person’s belief about his or her capabilities to participate in and succeed in a learning situation. Self-efficacy is a belief one holds about his or her ability to complete a task (Cole, 2002). A teacher’s most important challenge involves motivating students and meeting their literacy needs in the classroom by differentiating instruction based on the various literacy personalities among the class (Cole, 2002).

High self-efficacy is undoubtedly an important quality in a teacher, and having that high sense of self-efficacy in literacy will enable teachers to help struggling readers and writers in core classes such as English, math, science, and social studies. According to Goddard, Hoy, & Hoy (2004), “the distinction between perception of competence and actual competence or performance is particularly important when considering teachers’ sense of efficacy” (p.4). When a student is expected to learn and succeed, the teacher must possess the skills to help deficient readers. The responsibility for teaching and encouraging literacy learning is shared by all teachers and administrators, it is not the sole responsibility of those who teach English and language arts (Strauss & Irvin, 2000).

Students in effective classrooms are provided with knowledge, skills, and practice concerning reading and comprehension strategies. Examples from effective classrooms include recapping what is read or taught, modeling strategies for students, examining words used in the lesson, and having students write to summarize the lesson (Harmon, Keehn, Kenney, & Wood, 2005).

For multiple reasons, the number of students in middle school who struggle in class with basic reading and writing skills continues to increase (Lewin, 2003). Literacy activities in content-area middle school classes should be a priority. Vacca (2002) stated, “unfortunately, as students move into the middle grades and high school, they often receive little or no instruction in how to use reading and writing strategies” (as cited in Vacca, 2002, p.9). Despite some individual teachers incorporating content literacy practices into their core instruction, literacy programs are usually limited to specialized courses for lower achieving students (Vacca, 2002). However, with the current environment of high stakes testing and teacher accountability, the challenge of focusing on individual students and identifying their reading performance must be a priority for every teacher (Valencia & Buly, 2004).

Most middle and high school teachers do not feel they have the time or the expertise to teach reading (Tovani, 2000). They have significant training in their content area but not in the areas of literacy or reading. “In middle school, teachers begin to see themselves as subject area specialists, with reading relegated to English teachers or reading specialists. All new teachers, regardless of their core area, need to view reading and literacy as their responsibility” (Donahue, 2003, p.24). When a student begins middle school they do not necessarily know how to cope with rigorous reading material

(Tovani, 2000). Teaching strategies designed to enhance middle school students' literacy development often go unused in core area classrooms despite information about these methods being a part of preservice and inservice teacher training for the past quarter century (Sturtevant & Linek, 2003).

Content area teachers are in a strategic position to influence adolescents' uses of literacy for academic learning (Vacca, 1998). Effective teachers possess confidence in their ability to help students in the areas of reading and overall literacy. By emphasizing literacy, teachers could then help students read and write at a higher level which would expand their knowledge in all content-area classes, which in turn would help increase achievement levels on standardized tests. Teacher self-efficacy has been a significant factor in learning and motivation, and at the time was one of only a few teacher characteristics related to student achievement in a study conducted by the RAND Corporation (Bandura, 1977).

Literacy is much more than reading and writing, and in the 21<sup>st</sup> century a teacher must help students develop thinking, viewing, and speaking skills that will help them problem-solve and build a foundation for future learning (Readance, Bean, & Baldwin, 2000). The long-term goal is to ensure that all students achieve high standards in literacy. Achieving high standards requires sensitivity to individual differences, knowledge and expertise in appraising student progress, diagnosing student difficulties, and implementing and determining the effectiveness of different instructional strategies (Gredler & Johnson, 2004). Literacy is defined as a person's ability to use printed information to function in society, achieve goals, develop knowledge, and reach potential (Hock & Deshler, 2003).



Children require a basic set of skills in order to be successful students. They need to listen attentively, speak persuasively, read with understanding, and write with command (Carter, 2000). Students' perceptions of how competent they are as readers and writers may affect how motivated they are to learn in their core subject-area classes (Alvermann, 2001). Teacher training in literacy, regardless of their path to certification, is vital in developing a high sense of efficacy in the teaching of literacy skills. In 2000, Massachusetts reported that 59 percent of its candidate teachers could not pass a teacher candidacy test of literacy (Holland, 2003). Knowing or possessing expertise in a content area is not enough to ensure students are learning at high levels. Successful content-area teachers that use reading strategies and literacy activities to improve their instruction, regardless what subject area is taught, must consistently feature literacy training taught by a teacher with efficacy in this area. Hock and Deshler (2003) suggest, "changing initial teacher preparation programs to include increased attention on literacy instruction. Currently, many pre-service programs include little training for prospective teachers on how to deal with literacy problems in the adolescents they will be teaching" (p.53). Teacher education programs should put strong emphasis on literacy strategies and understand that students will not automatically know how to deal with rigorous reading material at the middle school level. When middle school students read better, more content can be covered in all core areas (Tovani, 2000).

Many students are not accustomed to retaining and clearly understanding what they read in text (Aaronsohn, 2003). Generally, American students have difficulty making inferences from reading, thinking critically about what they read, processing difficult material, expressing themselves effectively through writing, applying

appropriate levels of background knowledge, and seeing reading as a way to learn (Readance, Bean & Baldwin, 2000). Teacher expectations of their students are important and should match the literacy levels of the students they teach. Teachers must realize many students may not seek help in reading from a core area teacher if that teacher never addresses skills or reading strategies with their students (Tovani, 2000). Effective instruction helps develop a students' abilities to comprehend, discuss, study, and write about multiple forms of text by showing that they are capable of accomplishing everyday uses of language and literacy (Alvermann, 2001). Content teachers should be willing and able to work with reading deficiencies and help students in their efforts to read and learn from texts (Zipperer, Worley, Sisson & Said, 2002). Tovani (2000) recalls a teacher complaining that she was tired of trying to teach kids how to read. She hated the cliché that "all teachers are teachers of reading". The teacher thought it was ridiculous to expect secondary teachers to teach reading when they had so much content to cover. The teacher was quoted as saying, "there was nothing I did that made my good readers good and there is nothing I can do to help my poor readers improve. If they can't read well by sixth grade, it's too late" (p.79). Sadly, many core area teachers may also believe this statement.

Teachers who are willing to grow in their own knowledge of literacy by reflecting upon their own practices, reading the current research, and attending conferences and in-service training regarding literacy instruction will successfully foster a student-centered literacy environment in their classroom (Booth, 2001). The willingness to help deficient readers should be paramount in the daily objective for all teachers. A teacher's beliefs about reading and its importance and even their own reading habits may very well play a

part in the achievement, motivation, and engagement levels of their students (Lundberg & Linnakyla, 1993). If educators want students to become literate and successful, the teacher must analyze his or her own literacy abilities and make use of learning activities in the classroom that promote literacy (Clayton Jacobs, 2003).

There are reasons that only sporadic language arts integration actually occurs in most typical middle school classes (Lewin, 2003). Teachers are not adequately trained to teach integrated language arts. This would consist of oral reading, dialogue about the reading, writing, editing of the writing, and outside reading. Teachers assigning activities involving reading and writing in their content classes are usually English and language arts teachers. Despite a lack of training in reading and writing instruction, teachers should be comfortable in assisting students who struggle with basic reading and writing. When basic literacy difficulty with students is not addressed, the significant gap in literacy skills for some students will interfere with their ability to learn content-area subject matter (Lewin, 2003). Students need high quality reading and writing instruction and support from content-area teachers to continue developing their literacy skills across the curriculum (Readance, Bean, & Baldwin, 2000). Students should write frequently during the day throughout all classes. Teachers should be comfortable in assigning activities that focus on independent writing, research inquiry, and guided writing instruction (Booth, 2001).

Teachers' use of textbooks and how they assist students with reading textbooks is central to improving literacy skills in middle school. Research has shown that students who are taught how to write and edit different forms of text can improve their comprehension level of their textbooks (Billmeyer & Barton, 1998). While teachers are

charged with teaching complex subject matter, they are continually challenged by their students' difficulties in reading texts that are so vital to much of their content area instruction (Donahue, 2003). Teachers may not know what to do when many of their students cannot read a page from the textbook on their own (Readance, Bean, & Baldwin, 2000). Textbooks are one of three main factors that affect content area learning. The content area teacher must take responsibility in helping students read textbooks and supplementary materials effectively in order to comprehend and learn the content in an effective manner (Readance, Bean, & Baldwin, 2000). Many students do not possess the reading skills to comprehend the information from the textbook. Tovani (2000) suggests that,

“Standing in front of twenty-two students and assigning them inaccessible material they can't read is a waste of time and text becomes inaccessible when students don't have the comprehension strategies necessary to unlock meaning, don't have sufficient background knowledge, don't recognize organizational patterns, and lack purpose” (p.19-20).

Teachers have limited or no specific training in teaching literacy skills, but many teachers continue to assign informational text reading despite the fact that it's impact on developing literacy skills is negligible. Continuing to assign challenging reading to students who lack reading competency at the skill level sufficient for understanding will not improve student literacy (Lewin, 2003). Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998) defined teacher efficacy as “a teacher's judgment of his of her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” (p.4). Exactly how much literacy training a teacher

needs and how much it will positively affect his or her students is the key question. Teachers trained in literacy skills believe they were well-trained in the reading process and loved the challenge of identifying deficient readers and helping those students improve. Overall, they had a tremendous amount of self-efficacy in their ability to teach reading and writing (Maloch, Fine, & Flint, 2002). Content-area teachers who strive to improve both their students' literacy levels and their own self-efficacy in the teaching of literacy incorporate the belief that all students can and will become independent readers and writers (Taylor, 2004).

Researchers generally have not found a consistent relationship between teacher characteristics and student behavior or achievement (Woolfolk, Rosoff, & Hoy, 1990). Students who struggle to read in content area classes deserve instruction that is developmentally, culturally, and linguistically responsive to their needs. Teaching literacy cannot be thought of as a separate skill in the content area that is only taught in English and language arts. Teachers need literacy training to teach reading and literacy in order for schools to perform better in teaching higher-order reading, thinking, and expressive skills (Alvermann, 2001). Effective literacy programs in the middle grades emphasize literacy learning across the curriculum; and reading and writing are not relegated to an English class, but are taught and encouraged in all content areas (Strauss & Irvin, 2000). Placing teachers with high efficacy in teaching literacy skills in classrooms may improve the overall literacy development of the urban middle school student. "Learning in all content areas is supported by strong reading comprehension strategies" (Readance, Bean, & Baldwin, 2000, p.2). Jacobs (2003) suggests "supporting

literacy in all subject areas is not only what should be done, but what our students need” (p.59).

### Alternative routes to teacher preparation

This study involved alternatively trained middle school teachers in an urban school district, participating in a master’s of science in education graduate program with an emphasis in literacy. These teachers were employed by a southeastern Virginia urban school division. They taught content-area classes; math, science, history, and English, and have undergraduate degrees, but not in the area of teacher preparation. Alternative preparation programs allow persons to enter the teaching profession without completing a traditional teacher education program (Humphrey, Wechsler, Bosetti, Wayne & Adelman; 2002). “Generally, a traditional route consists of a degree program (bachelor’s or master’s degree) operated by a school or department of education that specifies a set of course requirements and other requirements that comply with the states’ teacher preparation regulations” (Mayer, Decker, Glazerman & Silva, 2003, p.1). Alternative route programs became prominent in the mid-1980’s when states projected high teacher shortages and were looking for creative ways to attract a certified teacher to each classroom (Dial & Stevens, 1993; Feistritzer, 1993). Generally, research has shown that alternative certification programs can provide teachers in both quantity and quality, which helps address staffing shortages while still providing highly qualified individuals to schools (Feistritzer, 2003). In addition, alternative preparation programs have also experienced success in providing urban schools with teachers who possess diverse educational and ethnic backgrounds (Haberman, 1999).

Feistritzer and Chester (2003) found,

“In the early 1980’s only eight states offered what are commonly referred to as *alternative routes* for prospective teachers to obtain teacher preparation, but as of 2002, 45 states and the District of Columbia offered some type of alternative certification. By some estimates, about one-third of newly hired teachers come through alternative certification” (p.1).

Alternative licensure or preparation programs may vary in many ways including size, scope, duration, and intensity; however, alternative programs now play a central role in attracting and training many new teachers throughout the country (Humphrey, Weschler, Bosetti, Wayne & Adelman, 2002). School districts have found alternative route teaching programs to be an effective strategy in finding and employing qualified teachers.

According to Haberman (1999), four overarching objectives create successful alternative routes to teaching. First, alternative routes increase the number of teachers in high demand subject areas such as mathematics, science, and special education. Second, alternative route teaching programs bring more people of color into the profession of teaching. Next, with the number of alternative route programs growing, it will become easier to attract teachers into urban schools. Finally, with more teachers certified, the need for non-qualified or emergency teachers will decrease. Over the next decade, it is estimated that the United States will need over ten million teachers (USDE, 2000). Taking into account the high attrition rate already evident in the teaching profession, the ability of schools to bring highly qualified teachers on board continues to be questioned. In a study of alternatively certified teachers, the majority of both males and females listed enjoyment of working with children, value of their subject area, and professional

fulfillment as the three most important reasons they decided to switch careers and become teachers (Lerner & Zittleman, 2002).

The recruitment of qualified teachers is an important element in both traditional and alternative route programs. According to the National Center of Education Information, 45 states offered alternative routes to teacher preparation in 2002 (Feistritzer, 2003). Feistritzer maintains that “we are seeing market forces in action” and that “people from all walks of life are stepping forward to meet the projected demand for teachers” (Holland, 2003, p.73). Teacher Quality and Public School Choice for the U.S. Department of Education, notes that almost one-third of newly hired teachers are now coming to classrooms without having traveled the old route; through the school of education pedagogical grindstone, sometimes called the “quiet revolution that has proceeded almost unnoticed” (Holland, 2003, p.74).

While alternative route teacher training programs continue to attract people into the teaching profession, colleges and universities must continue to try and recruit high achieving students into the field. Goodlad (2004) reported that several top-ranked universities prepare no teachers and have no departments or schools of education. Currently there are discussions within universities, and among college and university presidents, and in higher education organizations regarding the need to place teacher education higher in priority. There may no longer be a so called “built-in supply of teachers” within a college or university. Hess (2001), Kanstoroum and Finn (1999) found,

“Some supporters of alternative certification believe that it should be viewed as a first resort rather than a last resort, and that removing traditional certification



barriers will expand and improve the labor pool by encouraging academically talented and ethnically diverse candidates to enter the profession” (p. 16).

Teacher education, whether through traditional training or an alternative route program, must be able to attract energetic, diverse, and committed students to the career of teaching (Fullan, Galluzzo, Morris, & Watson, 1998). Alternative route training programs allow people from various life and educational experiences and backgrounds entry into the teaching profession (NCEI, 2003). The need for two million teachers over the next decade will spur educators to seek alternative routes to fill teaching vacancies (Legler, 2002).

## **CHAPTER III**

### **METHODOLOGY**

#### Introduction

Chapter III provides the: context of the study; research design; identification of data sources; measures; data collection procedures; and data analysis strategies. The purpose of this research was to (1) determine if student achievement differed between students taught by beginning TTT teachers prepared with content-specific coursework in teaching literacy skills and students taught by beginning non-TTT teachers who did not experience content-specific coursework in the areas of literacy, and (2) determine whether the TTT teachers who experienced content-specific coursework in teaching literacy skills had higher levels of literacy teacher efficacy than non-TTT teachers who did not experience content-specific coursework in teaching literacy skills. The following research questions were used to guide this quasi-experimental study:

- 1) Did middle school students taught by beginning teachers prepared with content-specific coursework for teaching literacy skills in the Transition to Teaching (TTT) school-university partnership achieve as well as the middle school students taught by beginning teachers (non-TTT) who did not experience content-specific coursework for teaching literacy skills?
- 2) Did beginning teachers who experienced content-specific coursework for teaching literacy skills through a non-traditional teacher preparation

partnership have higher levels of literacy teacher efficacy than beginning teachers who did not experience content-specific coursework for teaching literacy skills?

### Context of the Study

The TTT program referred to in the study as the alternative teacher preparation program at an urban southeastern school district in Virginia was awarded a \$1.7 million five-year Transition to Teaching (TTT) grant. The purpose of the TTT program was to meet the school division's need for highly qualified teachers in the high need core academic subjects (mathematics and science) in "hard-to-staff" schools. The main goals of the grant were: (1) to draw people into the profession of teaching; and (2) to design and implement alternative paths to teacher licensure in Virginia. The target populations of this TTT program were career switchers, recent college graduates, substitute teachers, and paraprofessionals with prior classroom experience. The objectives of the program were: (1) recruit and prepare highly qualified teachers through a alternative licensure program in a Local Education Agency-Institute of Higher Education (LEA-IHE) partnership, and ensure that these individuals receive their teaching license by meeting competencies defined in the Virginia Licensure Regulations for School Personnel (1998); and (2) provide to these individuals significant follow-up support with a mentor and cohort experience in the first three years of teaching to help them become highly effective teachers who make teaching their long-term careers.

It is important to note that the TTT program was a partnership between a high need local educational agency (LEA) and a local institute of higher education (IHE)

founded on the premises of a school-university partnership, specifically the professional development school model (Holmes, 1986). The research site selection of the high-need, majority-minority local education agency was based on this particular school division's alternative certification program that addressed Haberman's (1991) five standards for excellence for alternative certification programs: (1) a highly selective approach for the participants' acceptance was applied (to this Transition to Teaching program); (2) the program recruited the best faculty to teach the candidates; (3) training to implement meaningful curriculum content was afforded to these prospective teachers; (4) effective teaching methods that focus on pedagogy were included in the training; and (5) evaluation of the program's effectiveness, or otherwise, was conducted.

### Research design

A quasi-experimental design used for this study employed a two-stage analytical approach. The first stage compared the students taught by the TTT teachers forming the experimental group, and the students taught by the non-TTT teachers forming the comparison or control group. The second stage of the analytical experiment compared the TTT teachers, the experimental group, and the non-TTT teachers, the comparison or control group. The groups in each stage were intact; therefore this was a quasi-experimental study with no random assignment.

All beginning teachers used in the study were employed by an urban school division in southeastern Virginia and all students who participated in the study were students in the same school division. The experimental group consisted of 12 TTT teachers, and the comparison group consisted of 12 non-TTT teachers. There were 2

TTT math teachers, 4 TTT social studies teachers, 3 TTT science teachers, and 3 TTT English teachers matched with 12 non-TTT teachers for the comparison. The grade level, core subject area, gender, and race are listed in the appendix (Appendix 1, Table B).

TTT and non-TTT teachers were matched on the following criteria: years of teaching experience (must be less than three years for non-TTT teachers), subject, grade level, and certification status. All middle schools in the district were high need schools, and matching the TTT and non-TTT teachers in terms of grade level and subject was dependent on the non-TTT teachers participating in the study.

Survey data was collected from all study participants to determine their efficacy level in teaching literacy across the curriculum. The intact classrooms in the middle schools had heterogeneously grouped students. The level of student achievement was determined by spring 2005 quarterly assessment tests, spring 2004 and 2005 Virginia Standards of Learning Tests, and final course grades from 2004 in the core content-area classes. This data was provided by the school district.

#### Identification of data sources

Data was collected from teachers in the study via survey, individual school records, and the school system's central administration records. Due to the evaluation of human subjects, an application form was submitted to the College of Education Human Subjects Committee at the university. A Research and Program Evaluation Services Application for Research Authorization form was approved by the school division. To ensure confidentiality, the chair of the research committee at the participating school division, the coordinator of the TTT program, and the teachers involved in the study

provided the coded data. There were no individuals identified during the study as all academic information, quarterly test scores and Virginia SOL test scores remained anonymous. All schools, teachers, and students involved in the study were assigned pseudonyms for grouping purposes. Students were assigned six-digit codes that also included the type of teacher, TTT or non-TTT, a teacher number, and the actual three digit student number representing students in their core classes. Primary data concerning student enrollment, gender, ethnicity, special education, economically disadvantaged, and talented and gifted for each middle school in the participating school district is provided in Appendix 1, Table A.

Students from seven middle schools and twenty-four teachers from the same seven schools participated in the study. The twelve TTT teachers were beginning teachers, and the twelve non-TTT teachers were also beginning teachers with less than three years teaching experience. Teachers were matched from the same grade level and content-area when possible. Students for the experimental and comparison groups were all taught by the twelve TTT content-area teachers or the twelve non-TTT content-area teachers. There were 1,221 students used in the study: 233 in sixth grade, 657 in seventh grade, and 331 in eighth grade. The subject area breakdown was as follows: English, 357 students; math, 204 students; social studies, 314 students; and science, 346 students. The students were heterogeneously grouped in all core classes at each middle school in the school division. The school division in the study used a student information system scheduling program to ensure there was a race and gender balance throughout the division in every school. Middle school students in the study were assigned by the schools to four-teacher teams consisting of a teacher from all four core areas: English,

math, social studies, and science. This same teaming model was used in all middle schools in the school division. The achievement data from the spring 2005 quarterly assessment tests and the spring 2004 and 2005 Virginia Standards of Learning Tests, and the final grades in the content-area classes from 2004 were analyzed to determine any difference in student achievement.

### Measures

The Teacher Efficacy Instrument for Literacy Education (Appendix II) was used to measure the TTT and non-TTT teachers' general level of efficacy in the area of teaching literacy across the curriculum. A number of previously validated efficacy instruments were used to design the survey instrument used in this study. Bandura's Teacher Self-Efficacy Scale (1977), Szabo and Mokhtaris' Teacher Candidates Reading Teaching Efficacy Instrument (2004) and Gibson and Dembo's Teacher Efficacy Scale (1984) were all used to help formulate the survey instrument. The survey was piloted using thirty-two content-area teachers with less than three years of teaching experience from nine middle schools in another local school district. A reliability analysis was done on the literacy survey for validation purposes. The teachers used to pilot the survey had less than three years teaching experience in a school district located in the same southeastern region of Virginia. The highest mean scores from the pilot were from the same questions in the survey as were the highest mean scores from the TTT and non-TTT teacher groups. Six questions from the piloted survey resulted in a mean score higher than 2.00, while eight questions resulted in a mean score higher than 2.00 when the TTT and non-TTT teachers completed the survey. There were no "strongly disagree"

responses from the pilot group, as well as none from either the TTT or non-TTT group.

The pilot teachers were also asked for suggestions on wording as well as given a definitive feedback loop.

The dependent variable in the study, student achievement, was measured by end-of-the year or spring 2005 SOL tests for eighth grade students, and the spring 2005 quarterly assessment content-area tests for sixth and seventh grade students. Final grades in core content-area classes from 2004 were used as covariate scores for seventh and eighth grades students. The 2004 fifth grade SOL tests were used as covariate scores for the sixth grade students. The quarterly assessment test (Q4) was administered to sixth and seventh grade middle school students at the end of each of the four grading periods. SOL tests were administered in all content areas for eighth grade students; therefore, eighth grade students do not take a spring quarterly assessment test. A small number of sixth and seventh grade students complete a math SOL test if they are enrolled in pre-algebra, which is standard math for eighth grade students, or enrolled in algebra. The following chart graphically details what data is used for each grade level in each subject area:



CORE AREA SUBJECT	GRADE LEVEL	2004 SOL (Covariate Score)	2005 SOL	2005 Spring Quarterly Assessment	2004 Final Core Grade (Covariate Score)
ENGLISH	6	X		X	
	7			X	X
	8		X		X
MATH	6	X		X	
	7			X	X
	8		X		X
SCIENCE	6	X		X	
	7			X	X
	8		X		X
SOCIAL STUDIES	6	X		X	
	7			X	X
	8		X		X

The quarterly assessment tests were designed by the school system using the Virginia Standards of Learning Assessments (SOL) released test items from previous years, the SOL test blueprints, and the objectives and essential knowledge from the core subject curriculum guides. Test items are designed to mirror the types of questions students will be required to answer on the Virginia SOL. In a previous study analyzing student achievement (Gimbert, Cristol, Wallace, & Sene, 2005), Algebra I quarterly test scores were used from the same school district. The urban school district in this study administered the quarterly tests to monitor the progress of Algebra students throughout

the year. A panel of mathematics instructors, along with the mathematics coordinator for secondary education within the school district, worked collaboratively to design test items that mirrored the format and depth of items found on the state mandated Algebra I end of course assessment. The quarterly tests examined the students' ability to utilize algebraic symbols; to solve problems using graphs, tables, and equations; to understand patterns, relations, function, and models; and to solve complex problems using a variety of problem solving strategies (Wallace, 2004; District, 2004).

The Cronbach Alpha statistic test was used to estimate the internal consistency reliabilities of the three Algebra I quarterly tests which were  $\alpha = .98$ ,  $\alpha = .97$ , and  $\alpha = .98$  for Q1, Q2, and Q3 respectively. Correlation coefficients between the SOL scores and the Algebra I quarterly tests were estimated to assess the validity of the quarterly assessments. Pearson coefficients were significant for all the Algebra I quarterly tests. Therefore, the prediction that other quarterly assessment tests from the same school division would also be valid is assumed for the purpose of this study.

The SOL questions were designed at the Virginia State Department of Education (VDOE). The reliability and validity of the SOL tests are reviewed each year by the VDOE through an analysis of field tested items and student responses (VDOE, 1998). All SOL's use the same overall scaled score and the same category scaled scores. The scaled score ranges from 0-600, and the category score ranges from 0-50. This enables the experimenter to compare a student's performance on the SOL tests, as well as compare scores between students, which is the case in this particular study. Students can be compared across content areas because all scores are from the same scale. The scaled scores allow educators to measure performance; therefore it becomes possible to compare

a social studies score with a science score. For example, high schools combine math scores to come up with an overall math SOL score. Because the tests use the same scaled and category scores, high schools can combine scores from different math courses to come up with a SOL percentage pass rate. The Virginia SOL's are given in grades 3, 5, and 8 as well as in high school subject areas. The purpose of these educational assessments is to inform parents and teachers about what students are learning in relation to the SOL's and to make sure schools are held accountable in teaching SOL content (Hambleton, Crocker, Cruse, Dodd, Plake, and Poggio; 2006).

The content specific coursework for the teaching of literacy skills is the independent variable in the study. The TTT teachers are currently enrolled in a master's of science in education with an emphasis in literacy program through the partnership institution of higher education. The TTT teachers completed a total of 10 credit hours in content-specific coursework in the teaching of literacy skills over the course of the 2004-2005 school year including, *Introduction to Literacy* (1 credit), *Teaching Comprehension Through Direct Instruction* (3 credits), *Writing to Learn in the Content Areas* (3 credits), and *Vocabulary and Word Attack Strategies for Struggling Readers and Writers* (3 credits). In contrast, the non-TTT teachers completed only one three-credit course in their teacher preparation program, *Reading to Learn Across the Curriculum*, a required course to meet certification for the Virginia Professional Studies. The *Introduction to Literacy* course gave the TTT students a basic understanding of language acquisition, as well as the nature of reading and literacy development among adolescents. Students attended lectures, viewed demonstrations, and participated in group interaction and practice in classroom instructional techniques grounded in scientifically based research

for developing literacy skills. In the course, *Teaching Comprehension Through Direct Instruction*, students developed an understanding of the process of learning to read in the content areas. The course, *Writing to Learn in the Content Area*, focused on the concept that learning in all subject areas can be more meaningful and useful by using literacy strategies simultaneously with the conveying of course content. The teachers learned how to incorporate effective literacy strategies in their instruction without any loss of content coverage. Last, the course, *Vocabulary and Word Attack Strategies for Struggling Readers and Writers*, addressed techniques that teachers can use in the classroom to provide structured lessons for students struggling with reading, writing, and language skills. The curriculum for the TTT masters program is included in the appendix (Appendix III).

The Virginia Department of Education (VDOE, 1998), in their requirements for licensure regulation for school personnel, lists in Section 8 VAC 20-21-170 that all prospective teachers must have the three-credit course, Reading in the Content Area, to be endorsed to teach. The non-TTT teachers and the TTT teachers all took this class and therefore began with similar teaching training experience in the area of literacy. However, the four courses listed and described in the prior paragraph were only required of the TTT teachers.

#### Data collection procedures

The teacher participants in the study completed the literacy survey online during the summer of 2005. The data was retrieved and analyzed in the winter of 2005-2006. The quarterly test scores and course grades were collected from the teacher participants

throughout the summer of 2005. These students and scores were entered into a database in the fall of 2005. Spring 2005 SOL scores were obtained from the school division in the fall of 2005 and entered into the same database. The statistics in the database were transferred into the Statistical Packages for the Social Sciences (SPSS) in the fall of 2005.

#### Data analysis strategies

The data analysis was conducted by using the Statistical Packages for the Social Sciences (SPSS). The spring quarterly test score (Q4), the SOL scores, and the covariate final grades from the previous school year were converted to numeric scores based on the grading scale already in place and used by the school district in the study. This disaggregated student achievement data was then analyzed using SPSS. An analysis of variance (ANOVA) was done to compare student achievement of the TTT teachers with student achievement of the non-TTT teachers. An analysis of variance (ANOVA) was also completed to determine the difference in achievement scores by gender between the TTT and non-TTT students. Each grade level, 6-8, was compared through an analysis of variance (ANOVA). Finally, scores for the TTT and non-TTT students were compared in each core subject-area of English, math, social studies, and science also by running an analysis of variance (ANOVA). The teacher literacy survey was analyzed to determine the difference in teacher literacy efficacy between the twelve TTT teachers and the twelve non-TTT teachers. Descriptive statistics, an independent T-test, and a correlation analysis were used to compare teacher responses from the survey. Chapter IV details the findings of this study.

## CHAPTER IV

### RESULTS AND DISCUSSION

#### Overview

The impact of teacher preparation and teacher literacy efficacy on student achievement at urban middle schools was evaluated through this study. A literacy survey instrument, SOL scores, district quarterly test scores, and final course grades were utilized to address the two research questions. Twelve beginning teachers, in a Transition to Teaching (TTT) program, who experienced content-specific coursework in the teaching of literacy and twelve beginning teachers (non-TTT) who did not experience content-specific coursework in the teaching of literacy were participants in the study.

#### Findings

The initial research question addressed in the study was: Did middle school students taught by beginning teachers prepared with content-specific coursework for teaching literacy skills in the Transition to Teaching (TTT) school-university partnership achieve as well as the middle school students who were taught by beginning non-TTT teachers who did not experience content-specific coursework for teaching literacy skills? Sixth, seventh, and eighth grade middle school students were evaluated based on SOL scores, Q4 scores, and final grades received the year prior to the study in core academic classes. The following results were examined to determine how the TTT students compared with the non-TTT students:

(A): General comparison between the TTT and non-TTT students.

(B): General comparison of gender between the TTT and non-TTT students.

- (C): Grade 6 comparison between TTT and non-TTT students.
- (D): Grade 7 comparison between TTT and non-TTT students.
- (E): Grade 8 comparison between TTT and non-TTT students.
- (F): Subject specific comparison between TTT and non-TTT students.

This study looked at three different assessments: test scores from the school district quarterly tests, final grades of participating students from the previous school year in core classes, and SOL scores from the state assessment. Before these scores could be compared overall, or from any of the three grade levels, all the scores had to be converted to the same scale. The quarterly test scores were numeric ranging from 0 to 100. The SOL scores and the previous year's core-subject grades were converted to a numeric scale. Grades from the previous school year were originally reported in letter form, ranging from A to F. The school division in this study already had a conversion scale in place to change letter grades to numeric scores. The conversion scale was approved by the school division's school board and is as follows: A = 92-100; B = 83-91; C = 74-82; D = 65-73; F = Below 65. For the purpose of this study, Table 1 shows the percentage range for each letter grade and the numeric mean score that was used for each letter grade.

TABLE 1

Conversion Scale used for Q4 Scores and Final Grades

Letter Grade	Range	Numeric Mean Score
A	92-100	96.00
B	83-91.99	87.00
C	74-82.99	78.00
D	65-73.99	69.00
F	0-64.99	64.99

Next, the SOL scores had to be converted to the same numeric scores. The SOL scores range from 0 to 600. By using the same range as in the previous table, the SOL scores were converted, as Table 2 shows.

TABLE 2

Conversion Scale used for 2005 SOL Scores

Range	SOL Score Range	Numeric Score
92-100	552-600	96.00
83-91.99	498-551	87.00
74-82.99	444-497	78.00
65-73.99	390-443	69.00
0-64.99	0-389	64.99

(A) General comparison between the TTT and non-TTT students

In looking at the overall comparison in achievement between the TTT and non-TTT students for grades 6-8, there was a great enough variance in student test



performance at the .05 level of significance to show a measurable difference between the two groups. The sixth and seventh grade students' scores came from the Q4 test, while the eighth grade students' scores came from the SOL tests. The total number of student participants was 570 TTT students versus 651 non-TTT students. The mean descriptive score of the TTT students ( $M=75.42$ ,  $SD=9.49$ ; see Table 3) was more than a point higher than that of the non-TTT students ( $M=74.08$ ,  $SD=8.37$ ; see Table 3).

TABLE 3

## Descriptive Statistics for End of Year Assessments

TTT Students			Non-TTT Students		
N	M	SD	N	M	SD
570	75.42	9.49	651	74.08	8.37

\* all covariate scores included in analysis for pre-existing academic performance

An analysis of variance (ANOVA) comparing the final student assessment scores from 2005 with the type of teacher training, TTT or non-TTT, showed that there was a significant difference at the .05 level of significance ( $F=7.79$ ,  $p<.005$ ; see Table 4). There was also an effect size difference of .16, which estimates that the TTT students experienced approximately 1.6 months more academic growth in the school year as compared to the non-TTT students. The effect size was calculated by subtracting the smaller mean (74.084) from the larger mean (75.423), and dividing it by the square root of the error of the mean (69.64). The effect size is represented in the tables by  $n^2$ .

TABLE 4

## Analysis of Variance (ANOVA) for the End of Year Assessment

Source	N	df	F	$n^2$	p
TTT and non-TTT Students	570 TTT 651 Non-TTT	1	7.79	.16	.005

\* all covariate scores included in analysis for pre-existing academic performance

(B) General comparison of gender between the TTT and the non-TTT students

In looking at the overall comparison in scores between gender of the TTT and non-TTT students, the difference between the male students was significant, while there was no significant difference between female students at the .05 level of significance. There were 280 male TTT students versus 314 male non-TTT students. The mean score for the TTT male students was 75.15, while the mean score for the male non-TTT students was 73.68. These scores covered all three grade levels and all four core subject areas. An analysis of variance (ANOVA) showed that the male TTT students outperformed the male non-TTT students ( $F=4.66$ ,  $p<.031$ ; see Table 5) at the .05 level of significance. There were 290 female TTT students versus 337 female non-TTT students. The mean score for the female TTT students was 75.65, while the mean score for the female non-TTT students was 74.51. Again, the scores covered all three grade levels and all four core subject areas. An analysis of variance (ANOVA) showed no significant difference between the two groups ( $F=2.87$ ,  $p<.091$ ; see Table 5). There was an effect size difference between the male TTT and non-TTT students of .178, which means that the male TTT students experienced approximately 1.8 months of academic growth as compared to the male non-TTT students. There was also a lesser effect size for the female TTT students of .135, or 1.4 months of academic growth.

TABLE 5

Analysis of Variance (ANOVA) of Gender for End-of-Year Assessment

Source	N	df	F	$\eta^2$	p
Male Students (TTT & Non-TTT)	594	1	4.65	.178	.031
Female Students (TTT & Non-TTT)	627	1	2.87	.135	.091

\* all covariate scores included in analysis for pre-existing academic performance

(C) Grade 6 comparisons between TTT and non-TTT students

The sixth grade students in the study were evaluated and compared using the 2005 Spring Quarterly Assessment Test (Q4) given by the school division. The results from the Spring 2004 SOL tests were used as covariates for the sixth grade comparison. By factoring in the covariate score, differences in the readiness and abilities of the students prior to being taught by the TTT or non-TTT teachers was accounted for. This ensured that the difference between the treatment groups in the 2005 Q4 test was in part due to the type of teacher experience (TTT or non-TTT), as opposed to the previous levels of learning aptitude and achievement.

There were 178 sixth grade TTT students versus 55 sixth grade non-TTT students. In looking at the mean Q4 test scores, the TTT students had an overall mean of 75.57 and the non-TTT students 70.23. Inferentially, an analysis of variance (ANOVA) showed that there was a significant level of difference in achievement between the sixth grade TTT and non-TTT students ( $F=16.93$ ;  $p<.001$ ; see Table 6) at the .05 level of significance. Also, a significant effect size of .66 suggests that there was more than six months of academic growth experienced by the TTT students that was not experienced by the non-TTT students.

TABLE 6

Analysis of Variance (ANOVA) for Sixth Grade Q4 Assessment

Source	N	df	F	$\eta^2$	p
TTT and non-TTT 6 <sup>th</sup> grade students (Q4 Test)	178 TTT 55 Non-TTT	1	16.93	.66	.001

\* all covariate scores included in analysis for pre-existing academic performance

(D) Grade 7 comparisons between TTT and non-TTT students

The seventh grade students in the study were evaluated and compared using the 2005 Spring Quarterly Assessment Test (Q4) given by the school division. The Q4 test was the dependent variable and the type of teacher training (TTT or non-TTT) was the independent variable. The 2004 final grades in core area classes were used as covariate scores to once again ensure that the differences in the 2005 Q4 scores were due in part to the type of teacher training (TTT or non-TTT) as opposed to previous levels of learning aptitude and achievement.

There were 341 seventh grade TTT students versus 316 seventh grade non-TTT students. In looking at the mean Q4 test scores, the TTT students had an overall mean of 75.39, and the non-TTT students an overall mean score of 76.00. Inferentially, an analysis of variance (ANOVA) showed that there was no significant level of difference in achievement between the seventh grade TTT and non-TTT students ( $F=.772$ ,  $p<.380$ , see Table 7) at the .05 level of significance, as well as no significant effect size.

TABLE 7

## Analysis of Variance (ANOVA) for Seventh Grade Q4 Assessment

Source	N	df	F	$\eta^2$	p
TTT and non-TTT 7 <sup>th</sup> grade students (Q4 Test)	341 TTT 316 Non-TTT	1	.772	.068	.380

\* all covariate scores included in analysis for pre-existing academic performance

## (E) Grade 8 comparisons between TTT and non-TTT students

The eighth grade students in the study were evaluated and compared using the 2005 Spring SOL assessment scores. The Standards of Learning Tests (SOL's) are given by the state of Virginia to eighth grade students in all four core subject areas: English, math, social studies, and science. The SOL tests were the dependent variable and the type of teacher training (TTT or non-TTT) was the independent variable. The 2004 final grades in core area classes were used as covariate scores to once again ensure that the differences in the 2005 SOL scores were due in part to the type of teacher training (TTT or non-TTT) as opposed to previous levels of learning aptitude and achievement.

There were 51 eighth grade TTT students versus 280 eighth grade non-TTT students. In looking at the mean SOL test scores, the TTT students had an overall mean of 72.61, and the non-TTT student an overall mean score of 73.13. Inferentially, an analysis of variance (ANOVA) showed that there was no significant level of difference in achievement between the eighth grade TTT and non-TTT students ( $F=.256$ ,  $p<.614$ , see Table 8) at the .05 level of significance, as well as no significant effect size.

TABLE 8

## Analysis of Variance (ANOVA) for Eighth Grade 2005 SOL Tests

Source	N	df	F	$\eta^2$	p
TTT and non-TTT 8 <sup>th</sup> grade students (Q4 Test)	51 TTT 280 Non-TTT	1	.256	.077	.614

\* all covariate scores included in analysis for pre-existing academic performance

## (F) Subject specific comparison between TTT and non-TTT students

This study looked at comparisons between TTT and non-TTT students in the four major core areas: English, math, social studies, and science. In the area of English, there were 182 TTT students and 175 non-TTT students. All three grade levels, sixth, seventh, and eighth were part of the subject-level comparisons. Again, the sixth and seventh grade students were compared based on the Spring 2005 Q4 test scores. The eighth grade students were compared based on the Spring 2005 SOL scores. As mentioned earlier, previous grades and SOL test scores served as covariates to help ensure that any assessment score differences were in part attributed to the TTT or non-TTT teacher the students had during the 2004-2005 school year. The overall mean scores in the area of English were 78.32 for the TTT students and 74.76 for the non-TTT students. An analysis of variance (ANOVA) showed that there was a significant difference in achievement between the TTT and non-TTT students. The TTT students performed better ( $F=15.31$ ,  $p<.001$ ; see Table 9) than their non-TTT counterparts at the .05 level of significance. Also, there was a .41 effect size difference between the two groups, suggesting that the TTT students experienced 4.1 months more of academic growth during the school year than the non-TTT students in the area of English. It is also

interesting to note that English was the area where the TTT teachers had additional literacy classes to go along with their English teaching background.

TABLE 9

## Analysis of Variance (ANOVA) in the Core Subject Area of English

Source	N	df	F	$\eta^2$	p
TTT and non-TTT students	182 TTT 175 Non-TTT	1	15.31	.41	.001

\* all covariate scores included in analysis for pre-existing academic performance

In the core subject area of math, there were 40 TTT students versus 164 non-TTT students. The overall mean scores in math were 75.99 for the TTT group and 70.35 for the non-TTT students. An analysis of variance (ANOVA) showed that there was a significant difference in level of achievement between the TTT and non-TTT students. The TTT students performed better ( $F=26.23$ ,  $p<.001$ ; see Table 10) than the non-TTT students when measured at the .05 level of significance. The effect size of .90 shows almost a full school year difference in the academic growth of the TTT students in the area of math.

TABLE 10

## Analysis of Variance (ANOVA) in the Core Subject Area of Math

Source	N	df	F	$\eta^2$	p
TTT and non-TTT students	40 TTT 164 Non-TTT	1	26.23	.90	.001

\* all covariate scores included in analysis for pre-existing academic performance

In the core area of social studies, there were 184 TTT students and 130 non-TTT students. The overall mean scores in social studies were 73.19 for the TTT students and 75.09 for the non-TTT students. An analysis of variance (ANOVA) showed that there was no significant level of difference in achievement ( $F=3.85$ ,  $p<.051$ ; see Table 11) between the TTT and non-TTT students in the area of social studies at the .05 level of significance, as well as no significant effect size .

TABLE 11

Analysis of Variance (ANOVA) in the Core Subject Area of Social Studies

Source	N	df	F	$\eta^2$	p
TTT and non-TTT students	184 TTT 130 Non-TTT	1	3.85	.227	.051

\* all covariate scores included in analysis for pre-existing academic performance

Lastly, in the core subject area of science, there were 164 TTT students and 182 non-TTT students. The overall mean scores in science were 75.33 for the TTT students and 75.39 for non-TTT students. An analysis of variance (ANOVA) showed that there was no significant level of difference in achievement ( $F=.005$ ,  $p<.941$ ; see Table 12) between the TTT and non-TTT students in the area of science at the .05 level of significance, as well as no significant effect sizes.



TABLE 12

Analysis of Variance (ANOVA) in the Core Subject Area of Science

Source	N	df	F	$\eta^2$	p
TTT and non-TTT students	164 TTT 182 Non-TTT	1	.005	.007	.941

\* all covariate scores included in analysis for pre-existing academic performance

The second research question addressed in the study was: Did beginning teachers who experience content-specific coursework for teaching literacy skills through a non-traditional teacher preparation partnership (TTT) have higher levels of teacher literacy efficacy than beginning teachers (non-TTT) who do not experience content-specific coursework for teaching literacy skills? Teacher survey responses were rated using the following Likert scale: 1 = Strongly Agree; 2 = Agree; 3 = Disagree; 4 = Strongly Disagree. The descriptive scores from the survey (see Table 13) show the overall mean for each of the twenty survey questions for both the TTT and non-TTT teachers. The correlation coefficients were relatively low due in large part to the small teacher numbers in the study.

TABLE 13

Descriptive Statistics for Literacy Survey Responses

Question	TTT Teachers			Non TTT Teachers			Correlation Coefficient
	N	M	SD	N	M	SD	
1. Literacy levels in children are the single most important factor in how well they do in school.	12	2.17	.718	12	1.67	.492	.069
2. I consider the teaching of literacy skills to be a major part of my job.	12	1.67	.778	12	1.58	.669	.139

TABLE 13 (continued)

Question	TTT Teachers			Non TTT Teachers			Correlation Coefficient
	N	M	SD	N	M	SD	
3. Increasing literacy levels in students should be the main instructional focus in middle schools.	12	1.58	.793	12	1.75	.622	.046
4. Teachers are limited in teaching content in core classes because of low student literacy levels.	12	1.75	.754	12	2.00	.603	.231
5. Teachers should differentiate instruction based on a students' literacy ability.	12	1.75	.622	12	1.83	.389	.187
6. I am confident in my ability to recognize students who struggle academically due to low literacy levels.	12	1.92	.289	12	1.67	.492	.174
7. I find it difficult to teach students with reading problems.	12	1.92	.515	12	2.33	.651	.130
8. The grades of my students have improved based on literacy strategies and activities I employ.	12	2.00	.426	12	2.08	.289	.000
9. I have enough literacy training to teach literacy strategies and deal with literacy problems with my students.	12	2.25	.622	12	2.17	.577	.449

TABLE 13 (continued)

Question	TTT Teachers			Non TTT Teachers			Correlation Coefficient
	N	M	SD	N	M	SD	
10. My literacy training and coursework during my teacher preparation gave me the skills to effectively teach literacy.	12	2.00	.426	12	2.17	.577	.000
11. All teachers are reading teachers.	12	1.83	.835	12	1.83	.718	.043
12. I have the ability and training necessary to motivate my students to read.	12	1.83	.577	12	1.92	.515	.000
13. I am confident in my ability to gauge reading comprehension with my students.	12	2.08	.515	12	1.92	.515	.269
14. Reading the course textbook and materials is difficult for many of my students.	12	2.17	.577	12	2.17	.718	.210
15. I incorporate reading comprehension skills within my lessons.	12	1.75	.452	12	1.92	.289	.090
16. My school emphasizes a school-wide reading program (i.e. accelerated reader).	12	1.58	.669	12	1.67	.492	.594
17. I provide daily writing exercises for my students.	12	1.67	.492	12	1.75	.622	.058
18. All teachers are writing teachers.	12	1.50	.522	12	1.92	.669	.104

TABLE 13 (continued)

Question	TTT Teachers			Non TTT Teachers			Correlation Coefficient
	N	M	SD	N	M	SD	
19. I have the ability and training necessary to motivate my students to write.	12	2.00	.426	12	1.92	.289	.000
20. My school emphasizes a school-wide writing strategy (i.e. four-square model).	12	1.83	.577	12	1.75	.622	.000

The independent t-tests show through the means and standard deviations of each survey question that not much difference was evident in the efficacy levels in viewing literacy components. There were a few responses (Q1, Q4, Q6, Q7, Q18, see Table 14) showed a difference of more than .25 in the mean score between TTT and Non-TTT teachers. Important to note from survey results is that the mean for question 1, whether literacy levels in children are the single most important factor in how well they do in school was lower among the TTT group ( $M=2.17$ ,  $SD=.0718$ ) than the non-TTT group ( $M=1.67$ ,  $SD=0.492$ ); see Table 13). This is surprising given the fact that the TTT teachers are focusing on the literacy component in their masters program and have completed 10 graduate credit hours in literacy. Despite recently completing their courses that emphasize literacy activities in all core classes, the TTT group rated an “agree” on the Likert scale compared to a rating closer to “strongly agree” for the non-TTT group.

Question 4 in the survey asked if teachers were limited in teaching content in core area classes because of low student literacy levels. The responses to this question found the mean for the TTT group ( $M=1.75$ ,  $SD=0.754$ ) closer to the “strongly agree” response

as opposed to the response from the non-TTT teachers ( $M=2.00$ ,  $SD=0.603$ ; see Table 13). In question 6, the data indicated that non-TTT teachers were more confident as a group in their ability to recognize students struggling academically due to low literacy levels ( $M=1.67$ ,  $SD=0.492$ ) than were the TTT teachers ( $M=1.92$ ,  $SD=0.289$ ; see table 13). In question 7, TTT teachers as a group reported that they found greater difficulty in teaching students with reading problems ( $M=1.92$ ,  $SD=0.515$ ) than did the group of non-TTT teachers ( $M=2.33$ ,  $SD=0.651$ ; see table 13). The difference in this response may be related to inexperience as a first year teacher opposed to some of the non-TTT group being in their second year of teaching. Also, the TTT group may have been more aware of the overall literacy problems with their students as opposed to the non-TTT group. This could be expected with the extra literacy coursework completed by the TTT teachers. Question 18 was the final response with a significant mean score differential and it addressed whether or not all teachers are writing teachers. The TTT teachers felt stronger overall as a group ( $M=1.50$ ,  $SD=0.522$ ) compared to the non-TTT teachers ( $M=1.92$ ,  $SD=0.669$ ; see table 13). Again, recent graduate coursework emphasized to the TTT teachers that writing across the curriculum is a consistent way to improve student writing.

TABLE 14

Independent T-test Comparing TTT and non-TTT Teachers on the Literacy Survey

Question	t	df	Sig. (2-tailed)	Mean Difference
1. Literacy levels in children are the single most important factor in how well they do in school.	1.990	22	.059	.500
2. I consider the teaching of literacy skills to be a major part of my job.	.281	22	.781	.083
3. Increasing literacy levels in students should be the main instructional focus in middle schools.	-.573	22	.572	-.167
4. Teachers are limited in teaching content in core classes because of low student literacy levels.	-.897	22	.379	-.250
5. Teachers should differentiate instruction based on a students' literacy ability.	-.394	22	.698	-.083
6. I am confident in my ability to recognize students who struggle academically due to low literacy levels.	1.517	22	.143	.250
7. I find it difficult to teach students with reading problems.	-1.738	22	.096	-.417
8. The grades of my students have improved based on literacy strategies and activities I employ.	-.561	22	.581	-.083
9. I have enough literacy training to teach literacy strategies and deal with literacy problems with my students.	.340	22	.737	.083
10. My literacy training and coursework during my teacher preparation gave me the skills to effectively teach literacy.	-.804	22	.430	-.167
11. All teachers are reading teachers.	.000	22	1.00	.000

TABLE 14 (continued)

Question	t	df	Sig. (2-tailed)	Mean Difference
12. I have the ability and training necessary to motivate my students to read.	-.373	22	.713	-.083
13. I am confident in my ability to gauge reading comprehension with my students.	.793	22	.436	.167
14. Reading the course textbook and materials is difficult for many of my students.	.000	22	1.00	.000
15. I incorporate reading comprehension skills within my lessons.	-1.076	22	.294	-.167
16. My school emphasizes a school-wide reading program (i.e. accelerated reader).	-.348	22	.731	-.083
17. I provide daily writing exercises for my students.	-.364	22	.719	-.083
18. All teachers are writing teachers.	-1.701	22	.103	-.417
19. I have the ability and training necessary to motivate my students to write.	.561	22	.581	.083
20. My school emphasizes a school-wide writing strategy (i.e. four-square model).	.340	22	.737	.083

The results of the literacy survey were significant in that all 24 teachers in the study, both TTT and non-TTT, validated through their responses that reading and writing are critical elements in the achievement of students in middle schools. The shortage of literacy skills that students lack in middle school can severely impact their readiness for high school and future life. Students who typically drop out of high school do not

possess literacy skills strong enough to understand curriculum (Kamil, 2003). Teachers need to teach reading strategies in all courses and should be provided professional development and training that will provide them the self-efficacy to do so. The teachers forming the TTT group in this study are benefiting from coursework designed to train them to incorporate complex reading and writing activities in their classrooms that will strengthen student literacy skills and improve student achievement. There was not a single “strongly disagree” response recorded by a teacher on the literacy survey. Interesting to note, the highest combined mean score on any one question was from question number nine. This question asked whether or not the teachers felt that they had completed enough literacy training to effectively teach literacy strategies and help students with low literacy levels. The overall mean score was 2.21 (see Table 13). The response was much closer to “agree” on the scale, but no other question came as close to the “disagree” level.

A recent report in Education Week (January, 2006) indicated that the percent of eighth grade students across the United States who are proficient in reading has remained about the same from 1998 to 2005. The NAEP reports that nineteen of thirty seven states who tested eighth grade students in reading in 1998 and 2005 actually had their proficiency percentage decline (Olson, 2006). In Virginia, reading achievement gaps from the same eighth grade reading score have also changed very little over the eight-year period. Both black and white students have increased only one percentage point over the time period, suggesting that the achievement gap remains consistent between black and white students, and neither group made significant progress in reading achievement (Olson, 2006).



Literacy demands placed on students across the country continue to be measured by achievement scores in standardized testing. While programs such as the TTT program may be a very promising way to supply qualified teachers to public schools, student achievement in the areas of reading and writing should continue to be addressed within teacher preparation programs through literacy training and development. The literature review in this study clearly indicates that all teachers should be willing to actively improve student literacy levels through the use of daily literacy activities that address student deficiencies in literacy. According to a recent report by the National Governors Association in Education Week (October, 2005), only thirty percent of eighth graders nationally are proficient readers, and only forty percent of U.S. high school graduates possess the literacy skills that employers seek. The report also outlined a five step strategy which includes K-12 literacy report cards, school and district literacy plans, improving educators' capacity to provide literacy instruction, and measuring literacy progress at school, division, and state levels (Johnston, 2005). Teacher preparation programs, both non-traditional and traditional, should emphasize the teaching of literacy skills and make available courses that will help prospective teachers receive the training to effectively raise the literacy levels of the students they teach in all subject areas. Reading and writing are essential components of student readiness. Low literacy levels can hinder students from mastering other subjects besides English, and poor readers often struggle to learn in text-heavy classes and are frequently discouraged from taking many academically challenging courses (Au, 2000). Teacher efficacy and training may be the key to improving student literacy levels on a national scale.

### Summary

Teacher training programs do not seem to significantly impact efficacy levels in teaching literacy across the curriculum. The results of this study showed that both TTT teachers and non-TTT teachers had similar feelings and concerns in reference to the teaching of literacy. The statistical results of the literacy survey given to twenty-four TTT and non-TTT teachers revealed how similarly they felt about the importance of reading and writing in the overall learning of students. Only six of the twenty survey questions on the literacy survey revealed a mean difference of greater than 0.25 on a standard four point Likert scale (see Table 14). This indicated that all teachers in the study placed great overall importance on the literacy levels of students in regard to levels of achievement. The first survey question asked teachers if they felt literacy levels in students are the single most important factor in how well they achieve in school had a mean of 1.92 among all teacher responses. This indicates that the teachers would agree with the statement, and some teachers strongly agreed with the statement.

A relatively low number of responses on the literacy survey had a mean of 2.00 or above between subjects. These responses included questions 7-10 and 13-14. Three of these questions asked the teacher about their literacy training and reading comprehension recognition skills. Responses to these questions indicated that a portion of the teachers in the study felt stronger literacy training programs, or programs of study with an emphasis in literacy education and preparation, may serve teachers well in all core classrooms. Mean scores slightly above 2.00 on the 4-point scale indicated overall confidence in the group's ability to effectively teach literacy skills to their students. The second question of the literacy survey asked whether or not the teacher believed that teaching literacy

skills was a major part of their job. This particular response had a mean score of 1.62, making it the lowest survey mean and the closest response overall to the strongly agree level. The overall findings to the literacy survey indicated no true significant difference between the beliefs of the TTT and non-TTT teachers. Both groups indicated through survey data that teaching literacy skills is a major part of their job and impacts how they are able to teach their students.

Analysis of the student achievement data suggested some significant differences in achievement between students taught by non-TTT teachers and those taught by TTT teachers. Inferential statistics listed in the study showed some difference between the scores of students taught by TTT teachers and students taught by non-TTT teachers and the overall mean scores from the TTT students were higher.

## CHAPTER V

### CONCLUSIONS

#### Overview

Across the United States, the No Child Left Behind Act (2001) and state accreditation testing such as the Virginia Standards of Learning Assessments placed student achievement in public schools at the forefront of educational issues. Placing highly qualified teachers in every classroom by 2007 as required by NCLB, has many states and school districts scrambling to hire quality teachers in core academic subject areas. These teachers must hold a minimum of a bachelor's degree, pass state tests of competency in the subject area in which they teach, and hold full state licensure or certification (Linn, Baker, & Betebenner, 2002). Students who receive instruction from teachers not appropriately trained in content knowledge and instructional strategies within their core academic content area may be negatively impacted in their academic development (Howard, 2003). Middle school students need teachers who have been exposed to and prepared with content-specific coursework for teaching literacy skills.

Historically, many teachers in the middle grades have believed that the responsibility for instruction in reading and literacy rested with language arts or English teachers, rather than a shared responsibility of all teachers (Mallette, Henk, Waggoner, & DeLaney, 2005). Literacy coaches and experts are being used at schools as educational leaders recognize that a critical factor in student reading achievement is the knowledge and skill possessed by the teacher (Manzo, 2005). Achievement gaps exist between many sub-groups, and training teachers to effectively teach students skills in literacy is a critical element in closing these gaps. Because the ability to read and write is an access

skill to all content areas, literacy has become a significant educational focus and is gaining national attention (Fisher & Ivey, 2005).

Conducted through a collaboratively implemented school-university research agenda, the findings from this study revealed that middle school students of beginning teachers prepared with content-specific coursework in teaching literacy skills achieved better than middle school students who were taught by beginning teachers who did not receive content-specific coursework in the teaching of literacy skills. Currently, coursework in teacher preparation is the subject of much debate. Multiple studies are being conducted that explore teacher education programs, specifically the extent to what practices are followed in relation to existing scientific evidence on effective teaching in reading and mathematics (Viadero, 2005). Teacher training in the area of literacy education and the ability of core subject area teachers to confidently include literacy components in their daily classroom lessons may improve student achievement.

English TTT students in the study scored significantly higher than the non-TTT students. This may well be due to the fact that the TTT English teachers had additional literacy coursework through their preparation program. Also, the TTT math students scored higher than their non-TTT counterparts. It is possible that more literacy training as a math teacher may translate to better assessment scores. Some reports indicate that secondary mathematics teachers are underprepared to mediate the intersections between mathematics and literacy. Reform in teaching mathematics considers mathematics teaching as a means to access power in our society. Mathematics instruction places a value on mathematics as a vehicle to knowing and communicating and emphasizes the integration of literacy instruction with the teaching of mathematical content (Wallace &

Clark, 2005). Teachers of mathematics at the secondary level are usually prepared in the pedagogy of the discipline of mathematics, and may experience little or no preparation in the teaching of reading, writing, or oral language.

Teacher education is at a major crossroads in the United States. There are tremendous amounts of public attention focused on student achievement due to NCLB (2001) and state accreditation methods, and therefore much speculation concerning varying agendas for reform. Because of pressure placed on states experiencing teacher shortages, questions abound regarding the characteristics of effective teacher education. These questions continue to arise in both policy debate and current research on teacher education and preparation (Brouwer & Korthagen, 2005). Some states such as California, New Jersey, and Texas have used alternative teacher preparation for the past twenty years as a way to provide certification and licensure to new teachers. These programs have made it possible to increase the number of minority teachers as well as provide a means of recruiting and retaining highly qualified individuals in the teaching arena (Feistritzer, 1999).

Earlier studies involving students taught by teachers trained through alternative preparation programs found that these students achieved at about the same level as students taught by more traditionally trained teachers (Miller, McKenna, & McKenna, 1998). No longer are routes to teaching located exclusively within higher education at colleges and universities. Almost all states currently have alternative entry teaching program routes. Teacher preparation and education in the twenty-first century is about outcomes and the expectations of competent teacher preparation is that programs,

traditional and alternative, ensure that teachers can improve student achievement (Cochran-Smith, 2005).

The intent of this particular study was to explore the impact, if any, of job-embedded literacy professional development, offered through a joint partnership between a public school division and a state university on student achievement and teacher efficacy. In summary, the experience of job-embedded professional development impacted student achievement in middle school core academic content areas. The literacy survey data also suggested that beginning teachers place great value on the impact literacy has on their students and classroom. All teachers who participated in the literacy survey agreed that teaching literacy skills is a major part of their profession, and that teachers are limited at times in instruction during content classes due to low literacy levels in their students.

It seems entirely possible that teacher efficacy may be related to literacy instruction in order to understand whether or not a teacher is confident in teaching reading and writing across the curriculum. Developing a teacher's efficacy level in his/her ability to teach literacy skills in core subject area classes may be positively linked to student academic achievement. Mean scores from both the TTT and non-TTT teachers generally ranged between strongly agree and agree on the Likert scale, with the TTT teachers overall mean scores indicating slightly stronger agreement in terms of the importance of literacy and literacy training. This again indicates how important literacy is to teachers and to successfully working with their students. Content-area teachers sometimes view their role as getting across the content of their subject, be it science, math, English, or social studies, expecting that students will be equipped with the reading

skills they need to learn the course material. More often than not, teachers become frustrated in the level of difficulty their students encounter with course material. The conception of reading that is therefore in the U.S. is that reading is a type of technical, basic skill that is acquired once and for all early in a students' school career (Greenleaf & Schoenbach, 2001). Therefore, beginning teachers who realize the importance of literacy concepts in content-area classes link literacy with content and provide students with effective dualism between the two. Understanding how preservice and beginning teachers' individual beliefs affect their teaching and perceptions of literacy will only strengthen the preparation and induction of beginning teachers (Deal & White, 2005).

The Transition to Teaching program, or TTT program, provided teachers with an opportunity for post graduate study, continuous professional development activities, and supervision and training from within the school division. The twelve middle school TTT teachers in this study taught in one of four core areas: English, mathematics, social studies, or science, while representing seven middle schools in an urban school district. The TTT program supported the school system's efforts to recruit quality teachers through alternative measures. The findings from the study support much of the existing scholarship's assertion that a well constructed alternative preparation program is not significantly different from its traditionally prepared counterpart. Sources indicate that alternative teacher preparation programs that incorporate collaboration between school systems and universities produce teacher candidates who perform as well as traditionally trained teachers in the classroom (Gimbert, Cristol, Wallace, and Sene, 2005). Teachers participating in alternative preparation programs requiring extensive monitoring components during a student teaching or practicum experience, postgraduate training,



regular professional development courses, and continuous university supervision have a positive impact on student achievement (Miller, McKenna, & McKenna, 1998).

### Limitations

The study made use of different methods in collecting data in an attempt to minimize limitations. The teacher efficacy survey made possible the ability of the researcher to study the beliefs of both the TTT and non-TTT teachers in the area of literacy education. The classroom activities and strategies implemented by the 24 core teachers in this study are affected by their attitudes toward literacy education across the curriculum. Examining test scores from quarterly (Q4) and standardized (SOL) assessments permitted the researcher to compare the academic performance of students taught by both alternatively and traditionally prepared teachers.

The survey was piloted by surveying teachers in a local public school division consisting of ten middle schools. The survey was also examined by reading resource teachers and a handful of non-participating middle school core teachers. One possible limitation of the survey was social desirability, meaning that participants may have felt obligated to respond in a way that they thought the researcher might expect, rather than a truthful manner. The researcher addressed this possible threat of internal validity by piloting the survey as was previously mentioned. Also, other surveys and survey concepts were used as guides to help develop the survey questions. The two groups of teachers were able to complete the survey online without pressure from the researcher of any contact whatsoever. The teachers were simply asked to respond to the questions and to do so in an adequate period of time, which was roughly three weeks.

Other limitations or internal threats to validity in this study include selection bias, sample size, and maturation. Selection bias was a possible limitation due to the possible differences among the 1,221 students and the 24 teachers in the study. Students taught by TTT teachers may differ in ability when compared with students taught by non-TTT instructors. The data indicated that there was no significant difference in the two groups of students, however, any particular teacher in the study may have benefited from students with higher levels of success in a particular subject area during previous school years. The use of covariate scores in the form of course grades from the proceeding school year helped to minimize the threat of selection bias with the students. Selection bias in regards to the teachers participating in the study was also a possibility. The TTT teachers were matched with the non-TTT teachers in subject area, grade level, and years of teaching experience. However, it is possible that even one extra year of teaching experience in a relatively small teacher pool could indeed have an impact on survey responses as well as student achievement.

Sample size was a limitation due to the total number of 24 teachers used in the study. The teacher participants were not randomly selected but rather identified through availability, type of teacher preparation, years of teaching experience, and subject area taught. The study was strengthened by having a TTT comparison group of teachers to match with an existing comparison group of teachers. The sample size did limit the findings and results to those participating in this study, and therefore cannot be generalized to an entire national teaching population.

Maturation was another possible threat to the internal validity of the study in that the TTT teachers would be subject to and benefit from many of the same professional

development activities within the school system that the non-TTT teachers have already experienced. As an example, middle schools operate with teams of teachers. That is, each group or teacher team in middle school consists of one teacher from each core area and possibly teachers working in special education. Throughout the course of a full year in teaching, styles and teaching activities used inside the classroom may be affected by mentorship and professional collaboration within the team of teachers. While this may be a common and helpful tool for new teachers, it could be a negative factor when looking at baseline beliefs and practices in an experimental study. Also, as mentioned previously in relation to sample size, generalizability was a problem due in part to relating the findings of this research to other populations that may experience different settings, other treatment variables, and different measuring variables in determining the effect literacy training may have on student achievement.

#### Implications for Future Research

Future studies examining effectiveness of alternative preparation programs and literacy training for middle school teachers should be longitudinal. This would allow for a larger number of participants whose results could be generalized across the nation. Randomly assigned participants would also be beneficial because this would eliminate selection bias. Longitudinal studies with random assignment would allow a researcher to study yearly gains in student achievement by conducting and studying various assessment methods over a period of time. Determining previous achievement levels of student participants before they become part of a study would allow for a clearer picture of the effectiveness of various types of teacher training programs are. Expanding the data

collection procedures with student and teacher interviews, student surveys, teacher lesson plans, and student schoolwork would also allow the comparison of teacher certification to student achievement much more validity and accuracy. Examining achievement differences by gender in students is also an interesting area for future study. In this study, male TTT students outperformed male non-TTT students. This might have been by random chance, or it may have been related to the training differences in the TTT teachers and the non-TTT teachers. The TTT teachers, based on their research and training in teaching literacy, may have had higher expectations and more knowledge in working with struggling male students. Because the TTT teachers were on average older and were required to have five years of previous work experience, they may have been more authoritarian or more confident in the way they interacted with and taught the male students. According to Tomlinson (2001), gender can influence how students learn. There are specific learning patterns with each gender, but there is variance within these patterns. Generally, males prefer competitive learning while females prefer collaborative learning. However, there are many females that may learn better in a competitive learning environment. Elements that are influenced by culture such as expressiveness versus reserve, group versus individual orientation, and analytic versus creative thinking may very well be influenced by gender. Studies in student performance and how gender and ethnicity may be factors in how students learn may be a valuable resource to help improve student achievement.

Important information regarding student achievement in relation to the type of preparation a teacher received was recently reported from New York City, the nation's largest school district. According to the report from a six-year study, the certification

path that New York City teachers took to join the profession has little relationship to how effective they were in raising student achievement (Keller, 2006). The report suggested that the initial certification status of teachers when they were hired was not nearly as significant as the evaluations they received during their first two years of teaching.

Thomas J. Kane, a professor of education, was one of the authors of the report. He noted that there is heightened interest of late in looking at yearly increases in individual student test scores when trying to determine what makes a quality teacher. New York City has attempted to replace high numbers of uncertified teachers at a fast rate in an effort to comply with the NCLB initiative. Many of the new teachers in New York City are from alternative training programs. The report indicates that terminating teacher contracts after the first two or three years of teaching is perhaps a better way to ensure quality than simply looking at whether a teacher came through a traditional college or university program. The report suggests that looking at student test score improvement, peer and administrative evaluations, and parent rating may be viable methods of seeking to determine a teacher's level of quality (Keller, 2006).

Partnerships between universities, colleges, and school divisions are vital in preparing highly qualified teachers who can positively impact student achievement, as well as reduce teacher shortages and provide school divisions with more diversity in new teacher hires. School districts, colleges, and universities who have created partnerships would allow for meaningful future studies to be conducted examining the effectiveness of alternative teacher preparation programs. Many school districts are currently working in partnerships with local colleges and universities to provide alternate paths to teacher certification. These partnerships help foster programs which provide shorter paths to

becoming a teacher than the more traditional routes. Many of these programs also recruit a higher percentage of potential teachers who differ from those in standard teacher education programs. Alternative programs recruit more minorities and males as well as older candidates that have experiences working in urban settings through previous employment. With school districts in urban settings having higher teacher shortages, these alternative programs are a way to quickly fill teacher positions with candidates who better meet their needs (NPTARS, 2005).

Recent data also indicates that adolescents are not keeping pace with current literacy demands, and there also is evidence that racial and ethnic groups score much lower in reading and writing than white students. Since 1988, gaps in reading scores between white and black students in eighth grade have widened (Darwin & Fleischman, 2005). This study examined literacy efficacy between the TTT teachers and the non-TTT teachers. The data indicated that both groups place great importance on student literacy and teacher literacy training. Future studies looking at core teachers with reading and literacy training may help develop a national awareness indicating the need for literacy training for all teachers in every subject area.

Recent studies by the Teacher Pathways Project and Harvard University's graduate school of education examined teacher preparation programs and their impact on student achievement. The Teacher Pathway's Project, a partnership between the State University of New York at Albany and Stanford University, found that students of alternative route teachers performed about as well as students taught by teachers from traditional routes. Students with the alternative route teachers did make smaller initial gains in math and reading, but the differences were not deemed significant (Honawar,

2006). The study produced by researchers at Harvard University examined “fast track” teacher certification programs in California, Connecticut, Louisiana, and Massachusetts. The study revealed that alternative route programs include homegrown district programs, condensed university programs aimed at career-switchers, state run programs, and private programs such as Teach for America. Generally, findings showed that these programs attracted prospective teachers because they offered quick, convenient training with little or no cost (Viadero, 2005).

Adolescent literacy in middle schools is a high priority gaining momentum and interest. Most teachers in traditional teacher education programs complete only minimal coursework in the area of reading and adolescent literacy. Creating more time in the curriculum for reading classes and increased training in the teaching of literacy for middle and high school teachers is evidence that the focus on literacy is a priority. The Reading Next panel reports that more than 8 million students across the nation in grades 4-12 struggle at reading and that 70 percent of eighth grade students read below proficiency levels (Scherer, 2005). Further studies should examine what types of literacy programs in middle schools positively effect student achievement. Significant changes in literacy learning and teaching will come about only through school and district wide literacy plans (Ivey & Fisher, 2005). Content-area teachers are vital in supporting readers and writers of all skill levels. They should provide literacy instruction and activities in all their classes. In order to have literacy programs that target school-wide improvement and change, teachers need high quality professional development and training to help students learn by offering quality reading and writing instruction (Biancarosa, 2005). Studies that track teacher training and how literacy training changes what is done in the classroom

could prove pivotal in improving student literacy in the middle years. Also, a national study of school divisions with regard to professional development activities in the area of literacy training may help track how and why staff development funding is being used. Reading and writing are the key elements in improving student achievement as well as narrowing existing achievement gaps. The use of literacy strategies in every classroom during middle school will help smooth the transition of deficient readers from elementary school, and prevent many of these students from falling further behind their peers as they entire high school.

### Conclusion

Providing teachers in teacher licensure programs more training and expertise in the critical area of literacy may indeed help raise national reading levels, as well as better preparing students to be an integral part of society. The newly hired TTT teachers in this study who are completing literacy classes as part of their higher education program seem to realize early in their careers that literacy skills are lacking in many of their students. Greater success in middle school student achievement may well rest in the ability of divisions and states to develop literacy programs that address and overcome the many weaknesses students possess when they arrive in middle school. Literacy plans should include a few essential elements such as remediation programs structured to individual students, teaching comprehension strategies, integrating reading instruction into content-specific classrooms, and building vocabulary (Snow, 2002). There are increasing pressures on teachers to cover larger amounts of content in the current high-stakes testing environment that exists across the U.S. However, a small but substantial number of



middle and high school teachers are taking time to teach about reading and literacy in their content areas. The efforts made by these teachers have made a significant difference in attitudes and outcomes for many of their students (Schoenbach, Braunger, Greenleaf, & Litman, 2003).

The TTT alternative training program partnership addressed both quality teaching and literacy training. Through their master's courses, TTT teachers complete literacy training designed to help them become effective reading and writing teachers in their specific core area. Greater cooperation in the areas of alternative preparation and literacy education between schools and institutions of higher education may provide opportunities to attract high quality teachers into the profession who understand the critical role literacy has on student achievement. Increased training in literacy education appears to be important if we expect teachers to be knowledgeable about language and literacy issues and be adept at relating these understandings to the daily working knowledge of their students. This study demonstrated how one school-university partnership in a high need school division used job-embedded literacy professional development and coursework which generated quality beginning teachers who enhanced student achievement.

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# APPENDIX I, TABLE A

## Middle Schools from the Participating School Division

Demographic Information	School A	School B	School C	School D	School E	School F	School G	School H
<b>ENROLLMENT</b>	214	1162	1001	1255	918	1250	1155	611
<b>Gender:</b>								
Male	85 (39.7%)	592 (50.9%)	529 (52.8%)	638 (50.8%)	461 (50.2%)	629 (50.3%)	597 (51.7%)	326 (53.4%)
Female	129 (60.3%)	570 (49.1%)	472 (47.2%)	617 (49.2%)	457 (49.8%)	621 (49.7%)	558 (48.3%)	285 (46.6%)
<b>Ethnicity:</b>								
Native American	1 (0.5%)	12 (1.0%)	8 (0.8%)	14 (1.1%)	1 (0.1%)	11 (0.9%)	10 (0.9%)	4 (0.7%)
Asian/Pacific Islander	1 (0.5%)	15 (1.3%)	49 (4.9%)	23 (1.8%)	2 (0.2%)	39 (3.1%)	31 (2.7%)	25 (4.1%)
Black	209 (97.7%)	834 (71.8%)	498 (49.8%)	595 (47.4%)	875 (95.3%)	392 (31.4%)	706 (61.1%)	336 (55.0%)
Hispanic	1 (0.5%)	34 (2.9%)	92 (9.2%)	47 (3.7%)	8 (0.9%)	50 (4.0%)	68 (5.9%)	41 (6.7%)
White	2 (0.9%)	265 (22.8%)	349 (34.9%)	571 (45.5%)	30 (3.3%)	756 (60.5%)	340 (29.4%)	205 (33.6%)
Unspecified	0 (0.0%)	2 (0.2%)	5 (0.5%)	5 (0.4%)	2 (0.2%)	2 (0.2%)	0 (0.0%)	0 (0.0%)
<b>Special Education</b>	4 (1.9%)	131 (11.3%)	117 (11.7%)	137 (10.9%)	155 (16.9%)	113 (9.0%)	148 (12.8%)	66 (10.8%)
<b>Economically Disadvantaged</b>	175 (81.7%)	649 (55.9%)	386 (38.6%)	458 (36.5%)	724 (78.9%)	320 (25.6%)	531 (46.0%)	220 (36.0%)
<b>Talented &amp; Gifted</b>	0 (0.0%)	1 (0.1%)	137 (13.7%)	122 (9.7%)	17 (1.9%)	174 (13.9%)	0 (0.0%)	37 (6.1%)

## APPENDIX I, TABLE B

### Teachers Participating in Study

Teacher Characteristics	Math		English		Social Studies		Science	
	<u>TTT</u>	<u>Non-TTT</u>	<u>TTT</u>	<u>Non-TTT</u>	<u>TTT</u>	<u>Non-TTT</u>	<u>TTT</u>	<u>Non-TTT</u>
<b>Number of Participants</b>	2	3	3	4	4	2	3	3
<b>Grade Level:</b>								
6 <sup>th</sup>	1	1	1	0	1	0	1	0
7 <sup>th</sup>	1	1	2	2	2	2	2	2
8 <sup>th</sup>	0	1	0	2	1	0	0	1
<b>Gender:</b>								
Male	0	0	0	0	3	1	0	1
Female	2	3	3	4	1	1	3	2
<b>Race:</b>								
African American	0	1	1	1	1	0	1	2
White	1	2	2	3	3	2	2	1
Hispanic	0	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	0	0



## APPENDIX II

### Teacher Efficacy Instrument for Literacy Education

For the purpose of this survey, literacy is defined as the ability to read and write at a level adequate for written communication and generally at a level that enables a student to successfully function at their current grade level.

General Instructions: Read each item and circle the appropriate response 1-4.

#### RESPONSE KEY:

1 = Strongly Agree

2 = Agree

3 = Disagree

4 = Strongly Disagree

1. Literacy levels in children are the single most important factor in how well they do in school.	1	2	3	4
2. I consider the teaching of literacy skills to be a major part of my job.	1	2	3	4
3. Increasing literacy levels in students should be the main instructional focus in middle schools.	1	2	3	4
4. Teachers are limited in teaching content in core classes because of low student literacy levels.	1	2	3	4
5. Teachers should differentiate instruction based on a students' literacy ability.	1	2	3	4
6. I am confident in my ability to recognize students who struggle academically due to low literacy levels.	1	2	3	4
7. I find it difficult to teach students with reading problems.	1	2	3	4
8. The grades of my students have improved based on literacy strategies and activities I employ.	1	2	3	4
9. I have enough literacy training to teach literacy strategies and deal with literacy problems with my students.	1	2	3	4
10. My literacy training and coursework during my teacher preparation gave me the skills to effectively teach literacy.	1	2	3	4
11. All teachers are reading teachers.	1	2	3	4
12. I have the ability and training necessary to motivate my students to read.	1	2	3	4
13. I am confident in my ability to gauge reading comprehension with my students.	1	2	3	4

## APPENDIX II (continued)

**RESPONSE KEY:**

1 = Strongly Agree  
2 = Agree

3 = Disagree  
4 = Strongly Disagree

14. Reading the course textbook and materials is difficult for many of my students.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
15. I incorporate reading comprehension skills within my lessons.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
16. My school emphasizes a school-wide reading program (i.e. accelerated reader).	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
17. I provide daily writing exercises for my students.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
18. All teachers are writing teachers.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
19. I have the ability and training necessary to motivate my students to write.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
20. My school emphasizes a school-wide writing strategy (i.e. four-square model).	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
21. Which content area is your primary teaching area?	<b>English</b>	<b>Math</b>	<b>Social Studies</b>	<b>Science</b>	
22. What grade level do you currently teach?	<b>6<sup>th</sup></b>	<b>7<sup>th</sup></b>	<b>8<sup>th</sup></b>	<b>X</b>	
23. How many total years teaching experience do you have in your current school system?	<b>1 year</b>	<b>2 years</b>	<b>3 years</b>	<b>3+ years</b>	
24. What is your gender?	<b>Male</b>	<b>Female</b>	<b>X</b>	<b>X</b>	
25. What is your race/ethnicity?	<b>White</b>	<b>African American</b>	<b>Asian Pacific Islander</b>	<b>American Indian</b>	<b>Other</b>

26. Are you a student in the TTT (Transition to Teaching) program at Old Dominion University?

27. In assessing your teacher training program, what area(s) in your training would you have benefited from with more preparation?

### APPENDIX III

#### Curriculum for MS in Education with a concentration in Literacy Education Cohort 1 Schedule

<b>Summer Institute 2004</b>	
ECI 695	Introduction to Literacy
ECI 695	Teaching Comprehension Through Direct Instruction
ESSE 513	Human Growth and Development
<b>Fall 2004</b>	
ECI 695	Writing to Learn in the Content Areas
<b>Spring 2005</b>	
ECI 695	Vocabulary and Word Attack Strategies for Struggling Readers and Writers
<b>Summer Institute 2005</b>	
ECI 680	Reading to Learn Across the Curriculum
ECI 695	Using Literacy and Writing to teach Study Skills
<b>Fall 2005</b>	
ECI 695	Literacy Curriculum: Principles and Practices I
<b>Spring 2006</b>	
ECI 635	Inquiry Based Classroom Research
<b>Summer 2006</b>	
ECI 695	Trends and Issues in Adolescent Literacy and Learning
<b>Fall 2006</b>	
ECI 695	Literacy Curriculum: Principles and Practices II
<b>Spring 2007</b>	
ECI 637	Problems Paper in Reading

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